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THE FARM AND FIRESIDE

Flower-Gardens in Japan—By Jessie Ackermann

THE artistic sense of the Japanese is of a unique sort, and is most strikingly evinced in the arrangement of their flower-gardens, which to the Western mind are not gardens at all. The Japanese who have visited America and given attention to our idea of landscape-gardening regard the whole effect as utterly barbaric, a burlesque on Nature and an expression of artistic depravity. From their point of view it is only too true that nothing on earth lacks landscape effect more than the landscape-gardening of the West.

The gardens in Japan are surrounded either by high walls of boards, bamboo paling or a heavy growth of hedge. This accomplished, the next step is to reproduce in miniature some noted scene. The plan of a garden is rarely worked out from imagination; photographs, paintings and a study of Nature form the basis upon which the plot is laid out.

No matter how small the space—and sometimes it covers only a few feet—the entire scene of waterfalls, bridges, lakes, river-bed, mountains and valleys are all clearly defined. I have seen a noted view in which all these objects figure reproduced in a space only six feet square, where trees sixty years old clung to a mere fragment of earth in the crevice of a small rock.

Men make it the study of their lives to defeat all attempts of Nature along the lines of natural growth, the highest achievement being to fully develop in outline a dwarf tree. Not long ago I interviewed the most noted landscape-artist of Japan. I found him in a beautiful home surrounded by indescribable growths of many varieties, all of which are the result of much toil. Many of the trees and plants are placed in very shallow earthen vessels scarcely as deep as a soup-dish, and in these they had been growing for many years—from fifteen to more than a hundred. His special delight is a pine-tree, most perfect in outline and having all the appearance of the veteran that it is, for it has been in the family for three generations, and is a little over a hundred years old. The tree is carefully tended, being watered three times a day. The soil is of the poorest quality, and the shoots are nipped off as soon as they reach more than a certain length. This keeps the tree full and bushy, but does not admit of growth in height. Its full development is eighteen inches.

The trees are all raised from seeds of the large trees of their kind, these dwarfs never being allowed to bear. The seed is planted in poor soil in a small dish, or in a little crevice in a rock in which there is only a scanty supply of earth. It is starved to the extent of barely keeping it alive. Fruit-trees are treated in like manner, especially the plum and cherry. Often one kind is grafted upon the other, and when the time of blooming comes there are the two kinds of flowers fully developed.

Fruit-trees when dwarfed do not bloom until they are twenty-five years old, and then they are almost priceless. The flowers are perfect and of the usual size. In this garden there were over a thousand dishes of many sizes, in which sixty varieties of miniature trees were growing.

A striking feature of the garden is the great amount of animal life that abounds. Certain kinds of plants attract butterflies, of which there are a great variety. These people revel in the study of this form of life, and many of them have large and valuable collections. Great and small toads and frogs jump from rock to rock and appear at most unexpected times. Turtles, which have a peculiar significance, are highly prized and figure extensively in pools and rivers. Goldfish in great variety sport in their native clime and element. At eventide the beauty of a garden reaches it climax, especially if the moon hides her face and gives lesser bodies a chance to shine. Then it is that the fireflies come forth and spread their pretty wings, flitting from spot to spot, until a strange light makes bright the whole scene. The fascination of it is very great, and who would not be willing to sacrifice the unsightly "flower-bed" of the West in order to come so close to the heart of real Nature as almost to feel new life pulsate in every fiber of one's being?

It is noticeable that flowers form a small feature of the garden only when the grounds are very extensive, as in the case of the palace inclosure or the old estates of the former landed, petty rulers. When flowers are introduced every effort is made to produce the largest growth. The size of many families is almost beyond belief. As labor is very cheap there is no end of care bestowed upon a single plant. The development of a particular kind of flower becomes a fad, and is carried to great length. A few years ago a noted statesman who needed diversion from the cares of official life undertook the special cultivation of the morning-glory. The seed of a common variety was planted in a small pot, and the vine was not allowed to creep. Instead it was trimmed back to a few inches in height, and soon the stalk grew hard and sturdy. This and other plants were watched with great care. No insect was allowed to light upon it, that the pollen might remain unmixed and the species preserved untainted. The result was that after five years of careful cultivation the bloom measured nine inches in diameter. This led to the craze of morning-glory culture, and in the season in which the flower grows and blooms in every window and shop may be seen a small pot with the plant trained as a bush instead of a runner, sending forth not more than ten or twelve flowers, each year increasing in size if properly cared for.

As the usual garden affords so little space for flowers special places are set aside for the cultivation of a particular kind of flower, and when the blooms are at their best the railroads reduce the fares and the people take a holiday en masse, frequently two hundred thousand going in one day. These public parks are usually in the suburbs of some great city, and sometimes may be reached by train. Just out of Tokyo a portion of one of the public grounds has been given up to the cultivation of wistaria. The plant seems to thrive in this particular spot, for the blooms are scarcely less than three feet long. It is a sight never to be forgotten. Thousands of gaily dressed women and children strolling about under this shade or gathered in groups drinking tea and admiring the flowers is a picture that only Japan could produce.

Another ever-present feature of the garden must not be omitted. With these people there is almost a reverence for old stones, and the more grotesque these are the greater their admiration. When there is not a water supply to flood a channel for a river, the deficiency is made up by a river-bed formed of pebbles, which are placed so true to Nature that the intent cannot be mistaken. Flat stones are used to define a pathway over a small valley or leading up to a bridge and even to the door of the house.

In every garden there is one flat stone that is larger than all others. It is placed nearest the dwelling, and is called the "worshiping-stone." It is said that one of the early emperors had ordered a garden made in the grounds of his new summer palace. When this was completed he made a visit of in-

[CONCLUDED ON PAGE 7]

VIEW OF A JAPANESE GARDEN, SHOWING USE OF STONES AND STONE LANTERNS

FARM AND FIRESIDE

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WITH THE VANGUARD

IN HIS first annual message to Congress President Roosevelt clearly and forcibly presents his views on the subject of trusts. He says, in part:

"The mechanism of modern business is so delicate that extreme care must be taken not to interfere with it in a spirit of rashness or ignorance. Many of those who have made it their vocation to denounce the great industrial combinations which are popularly, although with technical inaccuracy, known as "trusts," appeal especially to hatred and fear. These are precisely the two emotions, particularly when combined with ignorance, which unfit men for the exercise of cool and steady judgment. In facing new industrial conditions the whole history of the world shows that legislation will generally be both unwise and ineffective unless undertaken after calm inquiry and with sober self-restraint.

"Much of the legislation directed at the trusts would have been exceedingly mischievous had it not also been entirely ineffective.

"In accordance with a well-known sociological law, the ignorant or reckless agitator has been the really effective friend of the evils which he has been nominally opposing. In dealing with business interests, for the government to undertake by crude and ill-considered legislation to do what may turn out to be bad would be to incur the risk of such far-reaching national disaster that it would be preferable to undertake nothing at all. The men who demand the impossible or the undesirable serve as the allies of the forces with which they are nominally at war, for they hamper those who would endeavor to find out in rational fashion what the wrongs really are and to what extent and in what manner it is practicable to apply remedies.

"All this is true, and yet it is also true that there are real and grave evils, one of the chief being overcapitalization, because of its many baleful consequences, and a resolute and practical effort must be made to correct these evils.

"There is a wide-spread conviction in the minds of the American people that the great corporations known as trusts are in certain of their features and tendencies hurtful to the general welfare. This springs from no spirit of envy or uncharitableness, nor lack of pride in the great industrial achievements that have placed this country at the head of the nations struggling for commercial supremacy. It does not rest upon a lack of intelligent appreciation of the necessity of meeting changing and changed conditions of trade with new methods, nor upon ignorance of the fact that combination of capital in the effort to accomplish great things is necessary when the world's progress demands that great things be done.

"It is based upon sincere conviction that combination and concentration should be not prohibited, but supervised, and within reasonable limits controlled; and in my judgment this conviction is right.

"It is no limitation upon property rights or freedom of contract to require that when men receive from government the privilege of doing business under corporate form, which frees them from individual responsibility and enables them to call into their enterprises the capital of the public, they shall do so upon absolutely truthful representations as to the value of the property in which the capital is to be invested. Corporations engaged in interstate commerce should be regulated if they are found to exercise a license working to the public injury. It should be as much the aim of those who seek for social betterment to rid the business world of crimes of cunning as to rid the entire body politic of crimes of violence. Great corporations exist only because they are created and safeguarded by our institutions; and it is therefore our right and our duty to see that they work in harmony with these institutions.

"The first essential in determining how to deal with the great industrial combinations is knowledge of the facts—publicity. In the interest of the public the government should have the right to inspect and examine the workings of the great corporations engaged in interstate business. Publicity is the only sure remedy which we can now invoke.

"What further remedies are needed in the way of governmental regulation or taxation can only be determined after publicity has been obtained, by process of law and in the course of administration.

"The first requisite is knowledge, full and complete—knowledge which may be made public to the world.

"Artificial bodies, such as corporations and joint stock or other associations depending upon any statutory law for their existence or privileges should be subject to proper governmental supervision, and full and accurate information as to their operations should be made public regularly at reasonable intervals.

"The large corporations, commonly called trusts, though organized in one state, always do business in many states, often doing very little business in the state where they are incorporated. There is utter lack of uniformity in the state laws about them; and as no state has any exclusive interest in, or power over, their acts it has in practice proved impossible to get adequate regulation through state action. Therefore, in the interest of the whole people, the nation should, without interfering with the power of the states in the matter itself, also assume power of supervision and regulation over all corporations doing an interstate business. This is especially true where the corporation derives a portion of its wealth from the existence of some monopolistic element or tendency in its business. There would be no hardship in such supervision; banks are subject to it, and in their case it is now accepted as a simple matter of course. Indeed, it is probable that supervision of corporations by the national government need not go so far as is now the case with the supervision exercised over them by so conservative a state as Massachusetts, in order to produce excellent results.

"When the Constitution was adopted, at the end of the eighteenth century, no human wisdom could foretell the sweeping changes, alike in industrial and political conditions, which were to take place by the beginning of the twentieth century. At that time it was accepted as a matter of course that the several states were the proper authorities to regulate, so far as was then necessary, the comparatively insignificant and strictly localized corporate bodies of the day. The conditions are now wholly different, and wholly different action is called for. I believe that a law can be framed which will enable the national government to exercise control along the lines above indicated, profiting by the experience gained through the passage and administration of the interstate commerce act.

"If, however, the judgment of the Congress is that it lacks the constitutional power to pass such an act, then a constitutional amendment should be submitted to confer the power."

IN A circular letter to the agricultural press Mr. Charles Y. Knight, secretary of the National Dairy Union, says:

"The new agricultural committee as announced by the speaker Tuesday is one of the most able we have ever had. It is made up as follows: Wadsworth, New York, chairman; Republicans—Henry, Connecticut; Haugen, Iowa; Dahle, Wisconsin; Wright and Connell, Pennsylvania; Haskins, Vermont; H. C. Smith, Michigan; Scott, Kansas, and Graff, Illinois; Democrats—Lamb, Virginia; Cooney, Missouri; Gordon, Ohio; Allen, Kentucky; Williams, Mississippi; Moody, North Carolina; Populist—Neville, Nebraska. Dennis Flynn, delegate from Oklahoma, is a member, but has no vote.

"This committe will stand either eleven to six or twelve to five for our legislation. We are certain that Wadsworth as chairman will give us a fair hearing. The influence of our friends who interceded for him will guarantee that.

"There were four bills introduced the first day. Congressman McCleary, of Minnesota, reintroduced the original Grout Bill, and it was numbered one on the calendar; Mr. Tawney, of Minnesota, introduced a bill similar in all respects to the Grout Bill, with the exception of the fact that the one-fourth-cent tax on uncolored oleomargarine was conceded upon advice of our friends in the Senate and at the suggestion of Mr. Tawney, we taking the ground that our position in taxing an article that in no way is fraudulent could not be sustained, and that such concession would strengthen us in the Senate, where we most need support; Congressman Davidson, of Wisconsin, one of our truest and stanchest friends in the House, introduced his original bill, taxing colored oleomargarine ten cents a pound and leaving two cents on uncolored; Congressman Henry, of Connecticut, reintroduced the original Grout Bill, and all were referred to the committee on agriculture.

"We decided to accept Mr. Tawney's bill, which is H. R. No. 4, and will be known as the 'Tawney-Grout Bill.'

"We regret to note that Mr. McCleary, of Minnesota, has cut loose and is endeavoring to have his bill accepted in face of our advice and protests. Mr. McCleary, we do not believe, is in as good position to look after our interests as Mr. Tawney, and the latter has through years of active efforts in behalf of the dairymen of the United States, and particularly through his splendid efforts for the Grout Bill at the last session, earned the right of honor to lead in the House, and there is great strife among our friends for the honor of leading what they expect to be one of the most notable and successful fights ever undertaken for the farmer in Congress.

"Senator Spooner, of Wisconsin, recently said to the writer, "They can't stop that bill in the Senate this time, provided it is gotten over from the House in season." Our friends and supporters, prominent among whom are Senators Spooner, of Wisconsin; Allison, of Iowa; Proctor, of Vermont; Dolliver, of Iowa; Hansbrough, of North Dakota; Burrows, of Michigan; Foster, of Washington; Hale, of Maine; Quay and Penrose, of Pennsylvania; Lodge, of Massachusetts; Platt and Depew, of New York, and enough others to make up almost a two-thirds majority, are interested in the proceedings of the House, and anxious to take the matter up and push it in the Senate.

"The bill will pass the House by a large majority. Our fight will be to get a vote in the Senate. Last winter, with the end of the session fixed by law for March 4th, and with the Senate filled with privileged revenue measures and appropriation bills, a small minority had the majority at its mercy. But at the present session, unlimited in its length, things will be different, and the bill will certainly be acted upon before summer adjournment."

IN HIS annual report First Assistant Postmaster-General Johnson says:

"The yearly increase in the postal revenues has resulted in the free delivery service becoming self-sustaining. Of the gross postal revenues of the United States for the last fiscal year, $74,295,394 came from 866 free-delivery cities. The remaining 3,600 presidential post-offices yielded $16,063,252, while the 72,479 fourth-class post-offices produced $18,913,519.

"The fact that the postal service in the largest cities is practically perfect is the best explanation of why the annual percentage of increase in the revenues of the free-delivery post-offices should be three times greater than in the smaller cities, and five times as large as that of the fourth-class offices. As rural free delivery reaches out into the country, giving equal facilities without regard to locality, he says it increases the revenues at a rate at least equal to that maintained in the free-delivery cities, where during the last five years it has averaged eight per cent.

"At the end of the present fiscal year 8,600 rural routes will be in successful operation, 6,000 being in effect December 2d. The latter figure represents just thirty per cent of the applications for such service filed since its inauguration five years ago. The inflexible policy is announced hereafter of avoiding maintenance of unnecessary post-offices and superfluous star routes contemporaneously with rural free-delivery routes.

"On July 1st last the force of 4,301 rural carriers was serving 2,840,644 people at a fraction over seventy-five cents per capita, and on December 2d 4,000,000 of the rural population were enjoying free delivery. Every establishment of a route, the report says, is followed promptly by a steady increase in the volume of mail both delivered and collected.

"The city free-delivery service now embraces 866 cities and towns, including four in the new insular possessions, employing an army of 16,389 uniformed carriers, who collect and carry the mails two or more times each working-day to 32,000,000 patrons. The total cost a year to the government for this service is fifty cents per capita. The gross receipts of the free-delivery post-offices were $74,295,395, an increase of over eleven per cent for the year. The total estimate for the next fiscal year for city free delivery service is $18,745,450.

"The average daily sales of money-orders in the United States, fees included, are $973,814. The aggregate amount of money-orders issued was $294,618,681, an increase of $39,000,000 for the year. In the five years just passed the number of presidential post-offices has increased twenty-three per cent; salaries of these postmasters increased eighteen per cent; allowances for clerks in the first and second class offices, thirteen per cent; the number of free-delivery offices, thirty-six per cent; the number of carriers, thirty-eight per cent; the cost of free-delivery service, twenty-four per cent; the increase of gross receipts at free-delivery offices, forty-one per cent, and money-order business, fifty-six per cent."

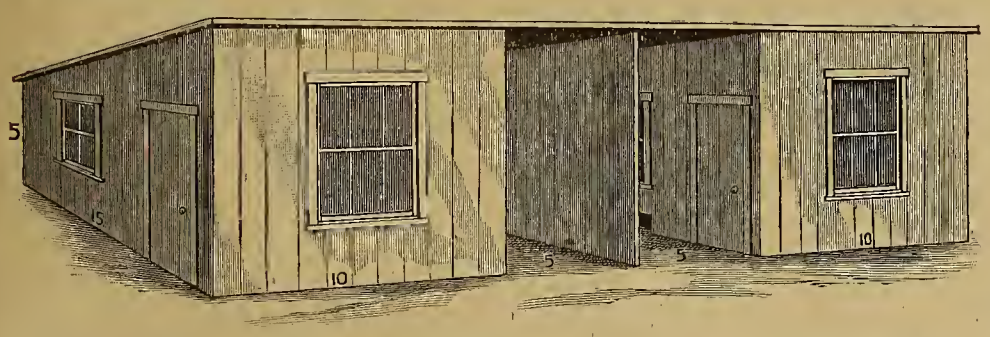
RURAL AFFAIRS

Feeding Farm Stock At the present high prices of oats and corn and other feeds the economical feeding of all sorts of farm stock is a big problem. It makes no difference, either, whether we have our granaries well filled or whether we have to buy concentrated feeds. The grain we feed represents so much money and expense in any case, and we should aim to accomplish the most with the least outlay. I raise only a portion of the grain that I need for feeding, corn possibly excepted. Oats is worth here not less than fifty cents a bushel, and shelled corn not less than seventy-five cents, or nearly double what these articles could be bought or sold for a year or two ago. For many years I have been a persistent buyer and user of bran and oil-meal, mixing these largely with ground oats and corn, the latter two grains of my own raising. But while bran prices now come close to twenty dollars a ton, I am asked to pay twenty-eight dollars for a ton of corn-meal, and thirty-two dollars for a ton of ground oats. I cannot afford to pay such prices, and have made up my mind to use for the balance of the season a mixture of wheat bran and wheat middlings in about equal parts, the mixture costing a trifle less than one cent a pound. This will make the expense for concentrated feed for a horse or cow come to about ten cents or less a day. As long as I have corn that I can use for the purpose I have it ground and mixed with the bran, using a little less of the middlings. Linseed-oil meal has also reached a figure which makes me consider the question whether to use it as largely as before or not. The high grain prices cannot tempt us to withhold full rations, which alone are profitable, from our farm animals.

Feeding Hens In an earlier issue I mentioned the ration for laying hens recommended by "Little Jimmy Rice." I have been using this same ration for some time, and this with the happiest results. My fowls are healthy and lay eggs even in this cold weather. The noon meal consists of a mash which is usually made of small potatoes or chopped beets boiled in water or skim-milk and water and then thickened with the meal mixture. The proportions were given as follows: Equal parts, by weight, of bran, middlings, corn-meal, ground oats and best quality of meat-meal. A writer in one of our best poultry journals recommends the following proportions; namely, two hundred pounds of bran, two hundred pounds of shorts and one hundred pounds each of ground oats and corn-meal, all thoroughly mixed. In making mashes oil-meal and prepared beef scraps and granulated clam-shells are added. Hereafter I shall reduce my proportions of oat and corn meal, as more expensive than the bran and middlings, but aim to have the full allowance of meat-meal, so that this will be about one fifth, by weight, of the whole mixture. For breakfast and part of the supper I feed scorched wheat, which I can buy in Buffalo at the present time for one cent a pound.

Cheap Poultry-houses Our friend Miller Purvis, known to most of our readers, makes the following sensible general remarks in reply to a query about poultry-houses: "There is no best plan to pursue in building such a house. A farmer boy with the knack of using a few simple tools may build a poultry-house that fills perfectly every essential condition. . . . We must have a warm sleeping-room, plenty of sunlight and freedom from dampness. Ventilation is a secondary matter. Unless a house is perfectly air-tight it is usually unnecessary to make elaborate arrangements for ventilation. If a scratching-shed is added to the house, made so as to allow the sun to shine in and to shelter the fowls from the north and west winds, the poultry-house is such a one as will prove entirely satisfactory—to the hens. Added conveniences in the way of dropping-boards, perches, nest-boxes and feed and water troughs are matters of detail that may be arranged to suit the convenience of the owner." Rice's model poultry-house seems to fill all these essential conditions, and extreme simplicity besides, in a remarkable degree. The illustration shows a double house, each part intended for fifty fowls and having a scratching-shed attached. It has a depth of fifteen feet, each house being ten feet wide, while the scratching-sheds have a width of five feet each.

A great deal will be gained if such a building can be placed where sheltered from north and west by a piece of forest or an orchard. But under all circumstances the sides of the house, and preferably the roof, too, should be double, with a filling of chaff, straw or shavings between the under and outer boarding, and each side made tight by means of building-paper or felt. In mild days during the winter the hens may be allowed to come out into the yard, but in cold days they should be confined to the house and scratching-shed, the open front being closed in by means of poultry-netting. I find that whenever I give my hens a chance to come out in cold weather, to stand around in the cold wind shivering, the egg-mill stops at once.



Much-Maligned Fruits The Keiffer pear, and its quality, has been a bone of contention among leading fruit-growers for many years, but usually it has come in for more abuse than praise. It always has seemed to me that we should appreciate a fruit for its good qualities rather than berate and belittle it because it is not perfect. The Keiffer undoubtedly has some good points. A number of fruit-growers who have Keiffer orchards are this year chuckling over their success in growing and selling at good prices their crops of this much-maligned pear. It takes a year of comparative fruit failure, like 1901, to make people appreciate such a sure cropper as the Keiffer. It is a beautiful fruit, too, when well grown. But the wonder to me is that our leading fruitmen can still quarrel over the quality of the old Keiffer. That is a point which should have been settled long ago if the critics would go at it without preconceived notions. A writer in the "Rural New Yorker" truly says: "If Keiffer pears are picked in September and properly ripened they are a very good pear to eat, free from grit or woodiness, and I find that when they are in perfect condition they are nearly equal to Bartletts. The trouble is they are left on the tree until the last of October, when they change entirely, and then no matter how ripened will be gritty at the core. Surely no one who has ever had Keiffers properly canned—that is, has had the pear in the right condition, and then properly treated and put in the can—would say that a canned Bartlett can compare with it." I have eaten Keiffer pears that were blown off the trees by the September winds, and then were picked up long afterward, when they had become soft, or had been gathered up and stored in crates in the basement of a barn until soft, that were truly enjoyable and delicious. I have tried Keiffers gathered just before snow and kept for a while in the hope of getting them in palatable condition, and no one would care to have more than one taste.

T. GREINER.

SALIENT FARM NOTES

Poultry Bill of Fare In giving a bill of fare or list of feeding-stuffs for fowls a great many writers—in fact, the most of them—name the various wastes of the farm, especially wheat screenings, as being the proper sort of diet. All the wheat screenings that I ever was able to procure were composed of cheat, various weed-seeds, smutty grain and a very small quantity of broken sound grain. I have tried this, together with some of the wastes usually recommended, and the results might be summed up in ciphers. If any person thinks he can obtain satisfactory results in raising young chickens, fattening fowls or producing eggs by feeding wheat screenings and the "wastes" of the farm, the sooner he gets that idea out of his mind the sooner will he get his poultry accounts on the right side of his ledger. No fowl or animal that I ever kept has seemed able to give a good account of itself when fed on trash. On most farms there is more or less scattered and broken grain about the feed-pens that is good feed for fowls; but it is sound grain, not screenings. This kind of waste cannot be utilized except by having fowls to pick it up, and they will, if managed properly, gather every particle of it. When there is waste grain about the feed lots or yards the fowls should not be fed in the morning, but be turned out to forage for themselves. Being hungry they will seek out every spot where there is likely to be food, and vigorously scratch over the litter thrown out of the mangers and stables and find every particle. If there is much of this waste they will need no feed all day. If there is but little it is a good idea to give them a light feed at noon of wheat, oats and broken corn. Every night they should have a good feed of corn or other grain.

The above is not the professional poultryman's method of managing fowls in winter, but it is all right for the farmer. The professional poultryman relies upon his fowls for a living, and he gives them his whole time; but the farmer has a hundred and one other matters and things to attend to and look after, and naturally he has no time to cook and stew and stir up the mashes and mixtures and tidbits and turn bone-cutters, which, by the way, cut more slowly than the "mills of the gods" and turn harder than a five-foot grindstone with two brush-scythes pressed hard on it. When the fowls on the farm are as well housed and well cared for as good stock should be they are profitable stock. They will lay a fair supply of eggs in winter, and will lay strongly fertile eggs in spring, when they are wanted for hatching, and the eggs will hatch chicks that are strong enough to be raised.

Crawfish Progress A few weeks ago I passed the home of a farmer who does lots of farming and feeds lots of stock and yet seems to be getting along in the world something after the manner of a crawfish. I have not been acquainted with his business methods, and often wondered why it was that he did not get ahead. I noticed that his wife had some very fine pullets in the yard, and I called in to ask if she would sell me a dozen at an advance of about forty per cent over the market price, I to pick out such as I wanted. She called to her husband, and after a brief consultation they decided to let me have them. As I was unable to carry them I said I would call four days later and get them. At the time appointed I drove out there over seven miles of rough road and found the couple busy yarding some pigs. After about an hour's work the task was completed, and I said I had come for the fowls.

The farmer said, "Well, I just thought the matter over, and concluded not to let any of them go at present!"

"You should have dropped me a note and saved me this long trip," I said.

"Well," he said, "I did think about it, but didn't have time to write one!"

And then I understood why he is paying seven-per-cent interest on about two thirds the value of his farm. In due time the man who holds the mortgage will take possession of the farm. There's lots more like him. They lack common business sense!

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OUR FARM

Farm Facts and Fancies

BUYING FERTILITY.—There is no more satisfactory way of buying the elements of fertility than in the form of feeding-stuffs, if one can make a profit from the feeding. It is the nearest approach to eating one's cake and yet keeping it that I know of. The essential elements of a fertilizer are found in liberal quantities in the protein feeds we buy to balance up the corn, timothy hay, straw and stover of the farm. When a commercial fertilizer is bought it has only one use—that of feeding a plant. A good feeding-stuff has two uses. The animal works the material over in its body, using and wasting about one fourth of the fertility elements contained in it; or, more correctly speaking, returns to us in manure the equivalent of about three fourths of the valuable plant-food contained in the feed. I am impressed by the necessity of growing more of our rich feeds—the protein, or muscle-making feeds—on the farm. But until the time comes that we do have an abundance of the clovers, peas and similar feeds, there must be liberal buying of bran, gluten or similar stuff to make our farm rations meet the requirements of our stock; and it is better to buy them oftentimes, and get both food and fertility value, than to keep stock on corn and timothy and then buy commercial fertilizers. These protein feeds are rich in nitrogen and in the mineral elements. They make very rich manure. The farmer is happily fixed who can buy with profit his fertility in the form of feeds, getting two values in this way. It is the safe solution of the fertility problem.

THREE TONS OF HAY.—An average of three tons of hay an acre may not seem so very extraordinary by the side of the yields secured by that successful grower, Mr. Clark, of New England, but as a matter of fact it is a tremendous average for any farmer, and a yield I can rarely secure from the very best acre of my farm. And yet I know one man who had formerly a rather thin hill farm and now secures that average an acre. What is the secret? There is none except that my friend found it profitable to stable a rather large lot of animals on which he was making a profit merely as a dealer, and the feed given was rich in protein. The manure went to the meadows until they had all they could use. Few men are so situated. The only lesson to us is that so far as feeding will pay there is no finer way of buying plant-food than in protein feeds.

THE BALANCED RATION.—There has been too much insistence upon all the niceties of fixing up a ration that would have just the proportion of the various elements recommended by the tables prepared by our scientists. Not that I would try to destroy any one's faith in these feeding standards! They are the sum of much accurate experimental work. But they can serve only as a sort of guide, and the experience of many feeders shows that different proportions often are just as profitable in the feeding. This was shown at the Pan-American dairy tests, and it has been shown at many other times. The matter has been further complicated by the effort to give variety to the feed. The result of it all is that many pretty intelligent farmers regard the whole matter as too complicated for them, and they pay no heed to anything said about balancing rations.

An experienced dairy teacher tells the farmers that he has learned to make half of the grain ration for cows from bran or oats. He regards one of these as essential to best results. They give the mineral elements in liberal quantities, and they furnish something the chemist does not value as highly as does the cows. Half the ration should be bran or oats. That is a simple proposition easy to start with. He uses silage with enough corn in it to furnish the fat-forming elements freely, so he does not need corn-meal in the grain ration. What, then, shall the other half of the grain ration be? Make it whatever is rich in protein, is convenient, reasonably cheap, and satisfactory in its effects upon the product. There is gluten, and dried brewer's grain, and buckwheat middlings, and many other materials. Such a ration balances itself pretty well without close figuring, or so the cow thinks.

CORN IN SILAGE.—The cow does not want a feed too rich in starchy material. It is not hard to get too much of it in the silage. The corn in the silo is just about as digestible as corn-meal, and we want the silage to have all of it that is needed, and no more. What is the limit? Experienced dairymen are concluding that fifty or sixty bushels of ears—equivalent to twenty-five or thirty bushels of grain—for every ten or twelve tons of corn as it goes into the silo furnishes about all of this material that is needed. The corn can be planted sufficiently thick to keep the grain yield this low, or the extra ears can be removed before the corn is run through the cutter. The latter method gives grain for the feeding of other stock. Such silage, with some clover hay if practicable, and a grain ration that has bran as a basis, approaches the requirements of the feeding standard, and of the cow, which is far more important.

OATS FOR HORSES.—I have said that some feeds contain properties the chemist cannot value aright. Oats is one of these, and nothing takes its place fully for the horse. This feed puts nerve and endurance in an animal. It is far from being a cheap feed, and farm-horses may be wintered largely on other grain, but when we do drop oats out, the hay should be a kind rich in protein. Corn and timothy are heating and hard on the digestion. If the first is freely used as the grain, which seems a necessity in the corn belt, some bran with the stover, or some well-cured pea-vine hay or clover with the corn, helps to balance up the ration and to keep the digestive organs healthy. The balanced ration is a common-sense ration, favorable to health and the making of muscle, while regardful of the cost of the materials used. DAVID.

Sugar-beets a Success in Colorado

The development of the beet-sugar industry is going on very rapidly in Colorado. There are three large factories already in operation—one at Grand Junction, another at Rocky Ford and a third at Sugar City. These are all in the southern part of the state, the first in the Grand Valley and the other two in the Arkansas Valley. But the industry has gained a foothold in the northern part of the state, and it is there that it seems to be gaining the greatest momentum. A factory has been erected in Loveland, Larimer County, and has started up with a large supply of beets of a very fine quality. Loveland labored under very discouraging circumstances for two years before it finally secured a factory. It was a small town, say of about twelve hundred inhabitants, but it is located in the midst of a very rich agricultural section and had a few very enterprising citizens. The first thing to do was to raise a bonus as an inducement for capital to undertake the enterprise. This was at last secured. It amounted to fifty thousand dollars in cash and land.

The results, even at this early date, seem to more than warrant all the effort put forth. The town has doubled in population, and is still growing with rapid strides. Large amounts of money have been put in circulation among the laboring classes and among the farmers. But, more important than all, it has acted as a stimulus to the further development of the industry in this part of the state. Sugar-factories are in prospect in Fort Collins, Greeley, Eaton and other agricultural centers.

Many fallacies as to the raising of sugar-beets have been brushed away by the experiences in Larimer County during the season just closed. The croakers said that the Colorado farmers would not raise beets; that it would be necessary to import Russians, Hungarians, Slavs and Mormons to work the beet-fields, and that these would make very undesirable citizens. In the vicinity of Loveland it was deemed best to import a certain amount of labor in order that there might be no failure of the first crop of beets. A number of Russians and Mormons were brought in, and were found to be industrious.

The prediction as to the backwardness of the Colorado farmer in cultivating sugar-beets has also been found to have been without foundation in the premises. Besides the large acreage of beets contracted for in the vicinity of Loveland a large acreage was contracted for in the Cache la Poudre Valley, and these beets were cultivated by the farmers themselves with such help as they could secure from the neighboring towns. In spite of some destructive hail-storms in May, and a hot, dry summer, with a shortage of water in many instances, a good average crop has been raised. The yield in the Cache la Poudre Valley runs from twelve to twenty-five tons to the acre, and the average will be somewhere between sixteen and eighteen tons.

The farmers have done this in the face of almost absolute inexperience, but appear to have encountered no insuperable obstacles. They appear to be well satisfied with their first year's experience. To show that the farmers take kindly to the new branch of industry, and believe that it is, and will be, a profitable one, it may be stated that by the middle of October more than eleven thousand acres of beets had been contracted for for the season of 1902 in the territory contiguous to the Loveland factory, as against less than sixty-five hundred for the present year. H. A. CRAFTS.

Irrigation in the Kankakee Country

Hon. Chris Holler, of St. Joseph County, the original Kankakee-marsh farmer, and the first to engage in the practical enterprise of straightening the river by cutting a deep ditch through his extensive domain west of South Bend for drainage purposes, changing the course of the stream and reclaiming hundreds of acres of waste land, put the ditch to a twofold use by making it do irrigation service during the dry spell last summer.

Mr. Holler took the precaution when he constructed the big ditch to place flood-gates about three fourths of a mile apart on lands that he owned, and his wisdom was manifest at the time when the gates came quite convenient to irrigate fields drained by the ditch. These fields are underlaid with tiling and also well supplied with lateral open ditches, all leading to the big ditch. When the corn and other crops on these lands commenced to be affected by the drought Mr. Holler shut down the gates, and the flow of water in the ditch was thus stopped and backed up for a distance of nearly two miles. The water thus raised finds its way into the lateral ditches, and seeking a level also runs up the tile-drains and under the cultivated fields, thus giving the necessary moisture to the roots of the corn, vegetables, grass and other growing things, which makes everything as fresh and green as if watered by bountiful rains.

This system of subirrigation which Mr. Holler wisely provided for when he began operations to drain his land brought him first-class crops of every description on the Kankakee-marsh portion of his possessions, while on the uplands the deadly work of the drought had just about destroyed everything. He has the largest corn raised in this section, and other crops in proportion.

Thus the despised Kankakee country, thought good for nothing except to raise wild game in, an expansive waste of little pecuniary value, is made not only to blossom as the rose, but to yield rich harvests of grain and fruits, while the scorching sunshine and blighting breezes are withering all that is struggling for life in the surrounding fields of sand and clay on the highlands.

Mr. Holler's example should be followed by all who own Kankakee lands; and the extremely dry season just passed is also a lesson to farmers everywhere in this section to do as their brethren of the far West are obliged to do, provide some way to irrigate their lands during the summer season. Farmers throughout Indiana and other middle states should carefully consider this important subject of irrigation, and act accordingly.

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Cutting a Big Swath

In the old days when all the grass was cut with a scythe the best man was the one who could bring down the widest swath and do it in such a manner that there would be no stalks left standing. Away behind him would stretch the clean, smooth path, a green ribbon of fresh grass lying to one side. "What a wide swath he cuts!" the envious neighbor would exclaim, as he watched the mower, so easily pressing his way down through the meadow. But if he tried to reach too far out into the standing grass the result would be that tufts of the tall timothy would be left behind. The swath would be no longer neat and clean. The mower was trying to do something he could not well accomplish—to cut too wide a swath.

A few days ago I visited a farm on which a man was trying to do more than he ought to. He was not a practical farmer, but, like many another man, he had a fancy that "most any one can be a farmer if he sets out to be." And he had "set out to be" on a scale which caused his neighbors to stand aghast for a time. He began by buying a fine herd of Jersey cows. That was all right. He had the foundation of success well laid, at least. But it is one thing to possess the requisite tools, and quite another to know how to use them. This man drove his Jerseys home, and it was an expensive home, too—good land, located not far from a thriving city, purchased at a cost of not far from two hundred dollars an acre.

The first mistake he made was in overstocking his land. He had more cows than his pasture would keep, and keep well. If anything will give dairying a setback it is that. The cows gnawed the grass right down into the ground. Over and over the land the cattle would roam every day, trying to find some fresh bite of grass. At night they would come down hungry, and standing by the gate would look over, with appealing cries to their master, as if pleading for better treatment. Of course, no dairy could do its best under such circumstances.

Then, this dairyman did not employ practical help. If one knows little about a business himself he may still succeed fairly well if he hire men to work for him who understand their occupation. The cows were not cared for in the stable as they should have been. The milk product was scant all summer long. Hungry cows, illy treated in the barn, will surely resent it. And these did so in such a way that the way began to look rather dark for the owner.

Besides this the farmer I am describing did not study Nature's ways as he should. Our old Mother Earth has so many secrets she will disclose only to him who wooes her confidence! When I saw this farm, late in September, there was growing upon it a large field of corn standing at that time perhaps six feet tall. "What is the man thinking about?" I asked. "The frost will cut that corn in a very few days, and no good will come from it. All his work will be wasted." Just at this moment the owner of the place was filling his silo. It was a fine-looking silo, and evidently no expense had been spared in its construction, but the corn he was cutting into it had practically no ears on it. The stalks were slender and contained little or nothing except water slightly sweetened. It would make very poor ensilage indeed. He would be compelled to feed large quantities of grain with it to get any return from it, and this would greatly lessen the profits from the dairy.

A gentleman living near this farm told me that the owner had become discouraged and wanted to sell the place. It is no wonder. We must all feel some degree of sorrow for him. It is too bad to make such a failure. He simply had been trying to cut too wide a swath.

What that man ought to have done, and what every other man should do who starts out to become a farmer without practical experience, was to begin carefully. Begin with a few cows. Employ good help. Study. The man who is willing to take the experience of others and shape his course by it will not come very far wide of the mark. True, varying conditions demand varying treatment. What will do for one locality or for one farm will not always answer for another locality or another farm. But the time will come when one may be able to understand his farm, climate, market and other conditions well enough to break away and become a law unto himself.

More men than we know of are trying to cut too wide a swath. This seems to be especially true in farming. Many of the failures among the farming community are due to that very cause. Men with little experience or small executive capacity are undertaking things beyond their reach. If they would start in carefully, and be content with small returns for a time, in a little while they might push out into wider fields and be reasonably sure of success. That would be encouraging, farming would become a business which men would like better, we would see fewer houses standing vacant through the country, and soon farming would take upon itself new spirit.

EDGAR L. VINCENT.

Flower-Gardens in Japan

[CONTINUED FROM PAGE 3]

spection to the grounds. Having completed the round he approached the palace, and as he reached the last stone he caught sight of the sinking sun, and here paused to engage in devotion. From this act the stone takes its name, and has become a leading factor in the stone arrangement of all gardens.

The real artistic sense of gardening has found its highest expression in the introduction of great stone lanterns as a garden ornament. The origin of the picturesque lantern is full of interest. In the eleventh century an old hermit made his home in the solitude of the mountain fastness. Finding himself in need of a lantern to light the path to his dwelling he piled together some rough stones, but left an opening toward the path. Placing a candle in a small space made in piling the stones he covered the opening with rice-paper to protect the light from the wind. A Buddhist priest happened that way, and seeing it he conceived the idea of improving upon the style and introducing stone lanterns as an attractive feature into temples and temple grounds. Each emperor has contributed his share of lanterns to the national sanctuary at Nara until they number over one thousand. Formerly they were lighted nightly, but the expense being great the illumination is now limited to but once a year.

The story of their introduction into the garden is also full of interest. It is said that one of the emperors possessed a rare night-blooming plant. In order to clearly see its beauty at night he caused a lantern to be erected, and the light softened by rice-paper. This gave rise to one of the most striking features of the present garden. The lanterns are sometimes made by piling stones into the fashion, but more frequently they are made of regular outline; and they are in such demand throughout the empire that an entire city is given up to the production of this expensive popular garden decoration characteristic of Japan.

Correspondence

FROM WASHINGTON.—I have received a large number of letters from friends in the East who desire to come to this state. I have endeavored to answer all that contained stamps, but think it would interest others if the editor will let me answer through the old reliable FARM AND FIRESIDE. If you settle east of the Cascades you will have nice level land free from timber, easy to cultivate and very productive, and excellent pasturage for cattle, but a foot of snow from November to April. On this side we have rain three hundred days in the year. The land is hard to clear. It is very indifferent land unless you chance to get river bottom-land. Improved land is very high. Unimproved land is selling at from $10 to $20 an acre. There is scarcely any government land worth taking left now either in Washington or Oregon. There are many sawmills on this side that give employment to large numbers of men. Logging-camps and mining-camps also give work to a large number of men. Wages are high, and work hard to obtain. Living is high, everything costing much more than in the East.

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Notes From Garden and Field

PLOWING TO DESTROY INSECTS.—The clean cultivation of which I spoke as means of destroying cutworms and other insect enemies in our gardens includes fall or winter plowing. Plowing our garden-patches in the fall or early winter has so many well-recognized advantages that we should never neglect it. It usually makes the soil so much more manageable in the spring to come, and the task of thorough pulverizing stiffer soils often so much easier, and besides improves our chances for making a garden next year very early to such an extent that it will pay for these reasons alone. We had plenty of other work to do the past fall, and had to leave our gardens unplowed. But in December we had land turned over with the plow as fast as we could get at it. There may be chances for that work in January. For myself I am not forced to fall plow as a protection against insect foes. Previous long-continued, thorough tillage has freed my soil almost completely of cutworms, wireworms, etc. But where such enemies abound, fall or winter plowing will be all the more urgently needed. Cutworms, I believe, live through the winter as larvae (worms), while wireworms hibernate as pupae, or cocoons. We will find them in snugly constructed little cells in the ground. When the soil is disturbed the cells are thus broken up, and the insects, brought to the surface, will perish from exposure before they will have a chance to provide themselves again with another cell in which to hide and find protection. Undoubtedly there are many other insect foes the numbers of which we can greatly reduce by fall or winter plowing. By all means let us take advantage of these mild spells during early winter.

GROWING CAULIFLOWERS.—L. S. R., a reader in Bowling Green, Ohio, asks for full information on the culture of cauliflowers, varieties, etc. It seems to me that the best way to get full information on the general cultivation of any garden crop is through the reading, or rather studying, of modern garden books. Almost every one of these crops has been made the subject of one or more special treatises, while about all of them are included in several newer and more extensive works on general-garden management. To keep track of newest developments, and get points on newer varieties, newer methods, of course it will also be necessary for you to read current agricultural literature, as found in our live agricultural papers. This is only as a suggestion of a general character. The cauliflower likes cool weather and a moist but well-drained soil of great fertility. Don't try to raise cauliflowers on poor soil or soil that is hardly good enough for big yields of ordinary field crops. Cauliflowers succeed only when there is plenty of nitrogen in the soil, and plenty of humus to retain moisture. A rich, black, mucky or sandy loam in which the mineral elements are not lacking usually gives good results. The great enemy to cauliflower culture with me is hot summer weather. I can usually grow good cauliflowers either very early—that is, before the heat and drought of midsummer—or late enough so that the plants will head after the hot season is a thing of the past. First of all I want good seed. This always has been, and still is, expensive—the most expensive, indeed, of all common garden-seeds. I think highly of the plump seed grown near the Pacific coast (Puget sound), where the summer nights are always cool and the atmosphere always moist. I find that it takes a little less time to grow a good head of cauliflower than a good cabbage-head, even of the earliest market sorts (Jersey, Wakefield, Eureka, etc.). The varietal differences in our leading sorts are quite small, so small, in fact, that I have not yet learned how to tell from appearance of head only a Snowball from an Early Erfurt, or from a Maule's Earliest or Long Island Beauty, etc. I start the plants in the greenhouse (or hotbed) in February, transplant to cold-frame in March, and to open ground just as soon as the weather and soil conditions will permit in spring. When the land is as rich as it should be, and under the stimulus of a small application of nitrate of soda (a tablespoonful to the plant scattered in a circle of five or six inches around it), the plants should make a rapid growth and make salable heads as early as the very first cabbages are ready for use or market. I usually break a few of the large outer leaves over the heart of the plant in order to protect it from the direct rays of the sun. I set my early cauliflower-plants in the same way and at the same time that the early cabbage-plants are put out, and give them exactly the same treatment in the way of frequent cultivation and repeated hoeings. The one enemy of this early crop which we have to guard against is the root-maggot. This often takes a large percentage of the plants if we don't watch out. Probably the surest method of preventing its ravages is the use of the tarred felt collars invented by Professor Goff, now of the Wisconsin Experiment Station (Madison). Each collar should be adjusted so as to fit snugly around the stem of the plant just on the surface of the ground. If in hoeing or cultivating the collar gets covered with soil, the latter should be carefully removed from it again, as the maggots work just under the surface of the soil; and if the tarred felt collar is covered half an inch or an inch deep with soil the maggots will have a chance to tunnel into the stem above the collar. I sometimes save my cauliflower-plants from this pest by another method. The plants are hilled up somewhat, then every few days the soil is removed and the stems freed from eggs or maggots by a thorough rubbing down, after which the plants are hilled up again. A small quantity of dry tobacco-dust or a mixture of this and bone-meal or lime applied upon the ground just around the stem will also tend to keep the plants free from maggots. Another enemy of the cauliflower, most formidable shortly after transplanting to open ground, is the flea-beetle. I usually drive this away by an occasional dusting with tobacco-dust.

T. GREINER.

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Inquiries Answered

Oyster-shell Bark-louse.—H. T., Hollandsworth, Tenn. The specimens of wood which you inclosed is infested with what is known as the oyster-shell bark-louse. In some sections this is very abundant and exceedingly troublesome. One of the simplest and best remedies for it is to spray the trees with whitewash in winter or early spring so as to thoroughly cover every part of it. This can be applied with a spray-pump, or if there is only an occasional tree, and they are small, it can be put on with a brush. It is important, however, to cover every portion of the wood that is affected with scale. When treated in this way the scales will come off when the lime peels off in the spring. If, however, the scales appear in good condition in the spring, it would be well for you to use kerosene emulsion about the time when the eggs hatch out, which will be some time in June. I hardly think this will be necessary, and if the whitewash answers the purpose, which I think it will do if thoroughly put on, there will be no need for further treatment.

Too Much Irrigation.—T. H. W., Grand Junction, Col. I am especially interested in your inquiry, from the fact that the appearance of the cherry-leaves did not indicate a fungous disease, but some constitutional trouble in the tree, and I sent it to Professor Paddock of your experiment station, and he says that he thinks that the trouble with your trees is that they have too much water, and that this condition of the soil has probably been favorable to the growth of certain root fungi, and it is probable that the two causes worked together. He thinks that this trouble is doing a great deal of damage on irrigated lands in your state. In many instances the level of the water in the soil has been raised to within a short distance of the surface, and this is especially true where farms are small and orchards are devoted to the growing of truck crops and small fruit. It should be generally understood by cherry-growers that cherry-trees need an exceedingly dry soil, and that too much water may easily bring about unhealthful conditions. I would like very much to hear from you as to what you think of this criticism on your irrigation, and to know how wet the soil is, and whether it is wetter than in previous years.

Growth on Raspberry Roots.—W. C. G., Faribault, Minn. The raspberry root with the large swelling on it which you sent is probably affected by some fungous or nematoid growth. In some sections of this country a growth of this sort is very injurious; for instance, in the South, where it injures the peach, but it has seldom done serious injury in the Northern states. I have known of several instances where the roots of raspberries have been badly infested with this trouble, and yet the plants have gone on and borne good crops of fruit. However, if I were making a new plantation I would prefer to have plants which had none of these characteristics. If your plants on the high land are healthy then I should prefer to set them, and would not take any from the low land. I would not use any sets of any kind unless they appear healthy and vigorous. I have seen some bunches on the roots of pears in the nursery, and while they are objectionable and I am always suspicious of them, yet it is seldom that they do serious injury unless other conditions are unfavorable to the plant. Now, this may be the case in your low land, and may account for the fact that the disease is generally confined to this portion, while on the better-drained soil it is not found, or at least not in large quantity.

Every-other-year Bearing.—G. M. S., Council Grove, Kan. It is quite usual for apple-trees to only bear once in two years. There are some varieties, however, that bear a moderate amount regularly each season. The reasons for this every-other-year bearing are not well known, but it is probably due to the fact that the tree so exhausts itself with the growing of fruit that it has no strength for the formation of fruit-buds. In the case of varieties that are apt to overbear it is certainly fortunate. If it were not for this fact they would necessarily be short-lived. One of the weaknesses of the improved Americana plums is that they bear every year in favorable locations, and on this account are short-lived, wearing themselves out. If you wish to have your trees bear every year instead of every other year I think it might be accomplished by giving them plenty of manure, light, air, good cultivation of the soil and spraying to prevent fungus and insect injuries. All this, however, means a great deal of work, and is much more than most farmers or gardeners will undertake, and as a consequence we shall probably always have years when the trees produce abundantly, then again alternate years when there is a shortage. I cannot identify the apples you name from your description, as it is altogether too meager; if you have specimens, and wish me to identify them, you will please send them by mail.

Root-grafting.—O. H. B., McLain, Ill. By root-grafting I take it you mean the root-grafting of apples as commonly practised by nurserymen in the winter. This is done about as follows: One or two year old apple seedlings are stored in a cool cellar in autumn. Such seedlings will have a root about twelve inches long and a top somewhat longer. The scions for grafting are also cut in autumn and stored in the same way as the roots. Perhaps the best material in which to store both scion and roots is good sawdust, but I have often used sand to good advantage, although the grit from it often sticks to the scions and roots, and is a little troublesome in dulling the knives used in grafting. Root-grafting consists of putting these scions and roots together. In doing this it is customary to use a piece of root at least four inches long and a scion four to six inches long. The union is made by what is known as the whip-graft. After being made up it is customary to wrap the joint with waxed cloth, but in some nurseries the union is simply tied together as a precaution against its working loose and no effort is then made to protect it from water. I think, however, that it is desirable to use waxed cloth, anyway in the Northern states. After being put together, which work may be done at any time from the last of December to the middle of March, the grafts are stored in sand, being buried entirely. Treated in this way they will grow together before it is time to plant them out in the spring; in fact, they should never be planted out until they are grown together. This growing together of the grafts is done without any starting of the buds. When the grafts are put together care should be taken that the barks form a good union on at least one side, and the longer this union is, the better the work. These grafts are planted in the spring in good, rich soil, putting all but one bud of the scion below the surface of the ground. Some growers prefer to use small roots, and only make one graft to the root, while other growers make several grafts from a root twelve inches long. There has been a good deal of discussion of this matter in the agricultural papers, but I am inclined to think that in either way good trees may be grown, and that it does not matter much in which way they are grown provided the trees are good and vigorous when planted out. I like, however, to have a rather long scion, so as to get the union well below the ground. The term root-grafting is also applied to the grafting of the roots of apples as they stand in the ground in the spring. This is quite a different process from the above. In this case the scions are cut in autumn, and the roots are grafted in the spring about the time that the buds on the trees commence to start.

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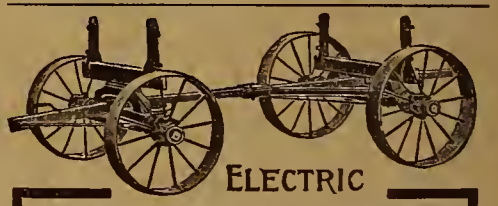
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An Illinois farmer said that after harvest he had fully 200 bushels of loose oats on the ground that he could not secure any benefit from, because the fence around the field would not turn hogs. Figure the loss for yourself. He also said, all this would have been saved if he had used the Kitselman Woven Wire Coiled Spring Fence, and the value would have gone a long ways towards paying cost of the fence.
With the Duplex Machine any farmer can make it himself at the actual cost of the wire. Catalogue free for the asking.
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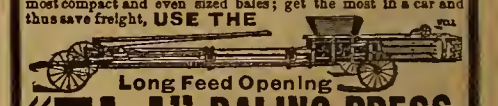
If you wish to bale the most hay in the shortest time; make the most compact and even sized bales; get the most in a car and thus save freight, USE THE

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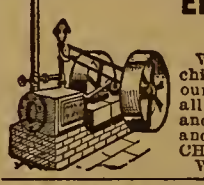
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FENCE! STRONGEST MADE. Bull-strong. Chicken-tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free.
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850,000 GRAPE VINES
100 Varieties. Also Small Fruits, Trees, &c. Best Rooted stock. Genuine, cheap. 2 sample vines mailed for 10c. Descriptive price-list free. LEWIS ROESCH, Fredonia, N. Y.

WEST MICHIGAN TREES.
Buds cut from bearing trees insure stock true to name. Two million apple, peach, cherry, plum, pear and quince. ORNAMENTAL STOCK. Order direct at wholesale prices. Write to-day for beautifully illustrated free catalogue.
West Mich. Nurseries, Box 11, Benton Harbor, Mich.

FREE INFORMATION ABOUT HENS
By Poultry Editor Vick's Magazine, Rochester, N. Y. Sample copy and subscription blank free.

THE POULTRY YARD

CONDUCTED BY P. H. JACOBS HAMMONTON N. J.

Bone-cutters and Egg Production

ONE of the most essential elements in the food of fowls is nitrogen. It is not necessary to attempt to explain what it is, as no doubt many readers have given attention to it, discussions in this department having brought out a great many facts relating to it. What is desired here is to point out that nitrogen and the mineral substances (lime, etc.) can be produced in the cheapest form by feeding green cut bone. In every one hundred pounds of fresh bone there is about three pounds of nitrogen, and as it enters into the composition of albumen (the white of eggs), as well as supplying one of the elements so necessary for the increase of muscle, etc., it is too important to be overlooked. Bone being phosphate of lime contains the bone-forming elements, and some of the bone when digested is changed to carbonate of lime, and assists in providing lime for the shells of eggs. Bone, therefore, is the most complete of all foods, as it contains nitrogen, lime and a sufficiency of the carbonaceous substances (which supply warmth, the yolks, etc.), giving it also a leading place among the egg-producing foods.

There is a difference between "bone" and "green bone." The latter contains more nitrogen, and is also more easily digested. The digestibility of a food is as important as its quality. A green bone is fresh and tough, because it contains the natural juices, or partial solvents; hence, it must be cut with what is known as a green-bone cutter. Formerly the green-bone cutters required more than the ordinary care and labor, but later they have been so improved as to perform the work with the least labor possible, are more easily cleaned, and the prices are low. In fact, when one receives a bone-cutter, and notices the strength and excellence of the material, as well as its construction, the low price will occasion surprise.

No one who keeps poultry, whether in small or large flocks, should fail to use the green-bone cutter. It not only enables one to utilize the bones that would otherwise be wasted, but permits of the purchase of a cheap food that gives a profit on the investment.

In some localities one cent a pound is considered a high price for fresh bone. It is cheaper than grain because a pound of bone gives better results than four pounds of wheat or corn, not so much for the elements contained as for the supply of those substances which are usually lacking. In other words, the bone "balances" the grain.

The value of an article is not in the cost, but in the product. If green bone gives better results than grain it is consequently cheaper. If a flock of hens are well fed, but do not lay, then the food is very expensive. If by the use of green cut bone the hens can be induced to lay, then the cost of the bone-cutter and the value of the bones used will be but little compared with other methods of feeding.

Colds and Blindness

During the damp days of autumn birds that are exposed to cold drafts are liable to several diseases. If they are on a roost, and a small stream of air comes in over them, it will do more harm than if the whole side of the house is open. It is not so much the temperature as the constant stream of cold air, like cold water from a small nozzle, that injures them. If the draft comes from the right it will sometimes be noticed that the right eyes of the fowls are swollen, some of the birds being blind. Fowls that are in a very fat condition seem to be more liable to the effects of cold drafts than others. The remedy is to remove the cause. If it cannot be discovered, then the safest method is to remove the roost and compel the fowls to remain on straw or leaves on the floor, anointing the eyes and face with camphorated oil or plain vaseline. If not too laborious, the eyes should be sponged with water as warm as can be applied, and thoroughly drying the face before anointing with the remedy. During the winter the usual wire fence will not protect against winds, hence it would be well to afford an open shed or some other form of wind-break when the birds are disposed to remain outside rather than in the poultry-house, as they will not be contented in a dark poultry-house, preferring plenty of light, being more willing to face the cold outside than to remain in a dark room.

Dried Blood

The ordinary dried blood used for addition to fertilizers is excellent for poultry—not tankage, but blood. It contains about ten per cent of nitrogen, valued at about fifteen cents a pound. It is very concentrated, containing only about thirteen per cent of water. The retail price of one hundred pounds of dried blood should be from one dollar and sixty cents to two dollars, according to location. It is cheap at two dollars for poultry-food. One pound of dried blood, two pounds of corn-meal, one pound of middlings and one fourth of a pound of linseed-meal should make an excellent morning meal for fifty hens. It should be given every other morning, allowing cut clover hay on alternate days. At noon give a gill of millet-seed and at night allow wheat and corn. Many formulas have been given for feeding, but dried blood as a cheap source from which to obtain the nitrogenous substances so necessary to the production of eggs should be resorted to, as it will pay well to use blood in any form.

Dry-picking for Market

When dry-picking turkeys or other poultry for market be careful to remove the pin-feathers. The carcasses are "plumped" by throwing them into ice-cold water, allowing them to remain in the water four or five hours or longer, then hanging them up, heads down, to drip and dry, keeping them in a cool place. Do not scald dry-picked birds. While the dry-picking method gives the birds the best appearance for market, for home use the best and easiest mode is to quickly scald them, then remove the feathers, and also the entrails. If "plumped" it should be done before drawing the entrails. The scalding process cleans the skin, and also saves labor.

Inquiries Answered

Cutting the Wings.—J. S. S., Wayne City, Ill., writes: "If the wings of a bird are cut, will the feathers grow again?"

REPLY:—The feathers will be replaced if pulled out, but if cut they will so remain until the bird molts, when new feathers will then appear.

No Grinders.—W. B. H., Newark, Ohio, writes: "Can you give me a remedy for chickens that have no grinders? I keep gravel, sand and cracked bone before them, and they also run in a large garden."

REPLY:—Fowls have no grinders except the gizzards; that is, they have no teeth. If the correspondent is correctly understood there is no other reply to give.

Swollen Eyes.—E. S., Bloomingdale, Ohio, writes: "Will you inform me what is wrong with my rooster? His right eye is swollen at the corner. Another one similarly affected died."

REPLY:—It may be catarrh, or even an injury. It usually happens to birds when exposed to currents of air on the eyes, especially through a crack in the wall, when on the roost. Anoint with camphorated oil once a day and force a few drops down the throat.

Blindness.—B. F. E., Harrisburg, Oregon, writes: "My hens become blind and then lame, or weak in the legs. Their combs are bright. They are about three years old, and are fed wheat and oats night and morning, being in good condition."

REPLY:—Grain fed exclusively tends to make fowls too fat. Remove the males, and notice if there are drafts in the poultry-house. Reduce the grain and give lean meat and more bulky food. The weak legs and blindness will pass away soon if change of food is made, and especially if males are removed from the flock.

THE DELAVAL COMPANY

acknowledge that they

Have Been Lying About Paris Separator Awards

One of their latest advertisements is headed

"More Lying as to Paris Separator Awards"

which is one of the most truthful statements they have made lately, as we believe the readers will acknowledge if they try to reconcile some of their statements in the advertisement referred to with some in their previous advertisements.

In the advertisement headed "More Lying as to Paris Separator Awards" they publish what purport to be three "official" statements, dated Stockholm, Sweden. A careful perusal of these will show that they are what the courts call secondary evidence and never accepted by any court if there is primary evidence. The Paris Exposition was not held in Sweden.

Two weeks ago they advertised as follows:

> "At the Paris Exposition the DeLaval machines received the Grand Prize, or highest award, * * * being entered and receiving such award in the name of 'Société Anonyme Separator,' which is the French translation of 'Separator Corporate Company,' the name of the DeLaval European organization."

Notice by this advertisement they claimed "Société Anonyme Separator" to be their European organization, thus acknowledging that no award was given to Aktiebolaget Separator.

But when we proved that "Société Anonyme Separator" exhibited a Butter Radiator or Butter Extractor, and not a Cream Separator, they lose their tempers again and accuse us of "lying and misrepresentation" and advertise the three statements referred to above in their efforts to prove that the Aktiebolaget Separator did get an award at Paris and claim it as their European organization.

We call special attention to the dates of these statements, viz.: December 5, 1900; April 2, 1901, and April 17, 1901, then ask the reader to bear in mind that it was in the last of November, 1901, that they advertised that the award they claim was given to "Société Anonyme Separator." From which it will be seen that they pay no attention to facts or their previous statements when caught in a trap.

Being cornered on one claim, they abandon it and claim another; cornered again, they go back to their first abandoned claim. We recommend our "would-be competitors" to try once more.

An expert remarks that the DeLaval Company will have to "eat hair" in order to make their statements hang together.

We still say that the official list of awards distributed at Paris did not contain an award to the DeLaval Separator Company or the Aktiebolaget Separator.

To be continued in our next.

THE UNITED STATES SEPARATOR STILL LEADS THE WORLD

To-day It Has No Equal

246

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

CYPHERS' INCUBATOR, World's Standard Hatcher. Used on 26 Gov. Experiment Stations in U. S., Canada, Australia and New Zealand; also by America's leading poultrymen and thousands of others. Gold medal and highest award at Pan-American, Oct. 1901. 32-page circular free. Complete catalogue, 196 pages, 8x11 in., mailed for 10c. Self Supplied Moisture. Ask nearest office for book No. 71. CYPHERS INCUBATOR COMPANY, Buffalo, N. Y., Chicago, Ill., Boston, Mass., New York, N. Y.

You Can Succeed in the poultry business just as we have if you follow the same plans. We tell all about what we have done and how we did it, in our new year book, **"Poultry for Profit."** Gives cuts of every variety of fowl, together with prices for singles, pairs, trios and pens, and eggs for hatching, in season. Cuts and plans for poultry houses. It cost too much money and time to be given away, but is sent for 10 cents. THE J. W. MILLER CO., Box 162, Freeport, Ill.

A LITTLE BEAUTY is what they call the 55 egg. **MARILLA INCUBATOR.** "Pretty is as pretty does" applies here, too. It is not a toy—made just like our large machines. Guaranteed to please you. "Satisfaction or no sale" our motto. Marilla Brooders the best made. Heated like a house. Crowding impossible. Complete catalogue for 4 cents. MARILLA INCUBATOR COMPANY, BOX 61, ROSE HILL, N. Y.

NO COLLEGE EDUCATION is needed to run the Sure Hatch Incubator. They are so simple that they run themselves. Made of California redwood, beautifully finished; twelve ounce copper tank, and hydro-safety lamp. Fully guaranteed. Our catalogue contains hundreds of photographs of the Sure Hatch Incubator at work, and valuable information. Sent free. Write nearest office. Sure Hatch Incubator Co., Clay Center, Neb., or Columbus, O.

Successful Incubator (The Egg) Brooder (The Chick) They take care of them. Mails loaded with words of praise from chicken people. Our great catalogue turns the lime light on the poultry business. Five different editions, five languages. English edition 4 cents, others free. DES MOINES INCUBATOR CO., Box 61 Des Moines, Iowa, or Box 61, Buffalo, N. Y. *Address nearest office.*

200-Egg Incubator for $12.80 Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day. GEO. H. STAHL, Quincy, Ill.

TWICE AS MANY EGGS and twice the profit when hens have raw cut bone. **Mann's Bone Cutter** 1902 Model. Open hopper and automatic feed cuts all bones, meat and gristle, without waste, easier and faster than any other type, or send it back. 10 DAYS TRIAL FREE—no money in advance. Free catalog explains all. We also manufacture Clover Cutters, Feed Trays, Corn Shellers, Granite Crystal Grit, Etc. F. W. MANN CO., Box 33, MILFORD, MASS.

VICTOR INCUBATORS The simplest, most durable, cheapest first-class hatcher. Money back if not as represented. Circular free; catalogue 6c. We pay the freight. GEO. ERTEL CO. Quincy, Ill.

INCUBATORS ON TRIAL Catalog of The Perfected Von Culin free. Practically perfect. Satisfaction or no pay. Successful result of 25 years' experience. Price $7 up. Address THE W. T. FALCONER MFG. CO., Sta. H, Jamestown, N. Y.

RUNS ITSELF! As simple in operation as a gentle summer shower. You strike a light and the **PETALUMA INCUBATOR** does the rest. No more worry over hatching. No more loss of eggs. The Petaluma regulates perfectly and hatches every fertile egg. 4 sizes. We pay the freight. Catalogue free. Petaluma Incubator Co., Box 74, Petaluma, Cal.

INCUBATORS AND BROODERS BEST HOT WATER PIPE SYSTEM. Simple, durable, economical and safe. Hatches stronger and more chickens from 100 eggs than any other. Prices reasonable. 96-page illustrated catalog of Incubators, Brooders, fancy poultry and poultry supplies free. C. C. SHOEMAKER, Box 433, Freeport, Ills.

GOOD RESULTS. To be absolutely sure about it use the RELIABLE INCUBATORS & BROODERS. If the eggs are right, you can't make a mistake. Just follow instructions—the Reliable will do the rest. OUR 20TH CENTURY POULTRY BOOK, mailed for 10c, tells all about it and other things you should know. We have 115 yards of thoroughbred poultry. RELIABLE INCB. & BRDR. CO., Box B-41, Quincy, Ill.

Incubators From $6.00 Up **Brooders** From $4.00 Up Fully warranted. Catalogue free. L. A. BANTA, Ligonier, Indiana

EGGS IN WINTER when they are worth double money may be had sure by feeding the hens shredded roots and vegetables. This Banner Junior Root and Vegetable Cutter shreds them all. Makes feed so fine the chicks, broilers and ducklings can eat it. Special Booklet mailed free. O. E. THOMPSON & SONS, YPSILANTI, MICHIGAN.

$6,000 POULTRY CATALOGUE FREE! Has no rival. Lowest prices of fowls and eggs; 40 breeds Turkeys, Geese, Ducks and Chickens. The book tells all. Grandly illustrated, 15 best hen house plans, how to breed, feed, cure disease, etc. Send 10c for postage and mailing. J. R. Brabazon, Jr. & Co., Box 12, Delavan, Wis.

$5. 50 EGG SIZE. Self-regulating. 30 DAYS TRIAL. Satisfaction guaranteed or no sale. 100 EGG SIZE $9.50 200 EGG SIZE Compartment. $15 No. 28 Catalog 2c. BUCKEYE INCB. CO., SPRINGFIELD, O.

IF YOU WANT EGGS It will pay you to get an easy running, ball bearing, Stearns BONE CUTTER. New poultry book sent free. E. C. STEARNS & CO. Box 101, Syracuse, N. Y.

STAR INCUBATORS Best on Earth. We will send free on request our illustrated catalogue of incubators, brooders, foods and remedies. Star Incubator Co., Bound Brook, N.J., or 38 Vesey St., N.Y.

POULTRY PAPER, illus'd, 20 pages, 25 cts. per year. 4 months trial 10 cts. *Sample Free.* 64-page practical poultry book free to yearly subscribers. Book alone 10 cts. Catalogue of poultry books free. *Poultry Advocate,* Syracuse, N. Y.

$20 WEEKLY straight salary and expenses to men with rigs to advertise and introduce Poultry Compound. Royal Co-Op. Mfg. Co., Dept. L, Indianapolis, Ind.

GREAT BARGAINS In Pure-bred Poultry and Eggs. 16 varieties, large poultry book and catalogue for stamp. F. FOY, Box 10, Des Moines, Ia.

DON'T SET HENS the same old way when our new plan beats it 10 times. 100 Egg Hatcher Costs Only $2. Over 94,000 in use. 1000ds test'ls. 6000 agents wanted for 1902, either sex. Pleasant work. Big profits. Catalog and 10c Egg Formula FREE if you write today. Natural Hen Incubator Co., B 63, Columbus, Neb.

DEATH to LICE on hens & chickens. 64-p. Book Free. D. J. Lambert, Box 303, Apponaug, R.I.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

A Hard "Lump."—G. T. J., Columbus, Kan. Please give a description of that "lump" on your colt's leg, and state more exactly where it is situated.

Cows not Conceiving.—F. S., Frankfort, Ind. Not knowing the particulars and the conditions under which your cows are kept the best advice I can give you is to wait until next spring when your cows are turned out to pasture, and then to breed them the first time you observe any symptoms of heat.

Difficult Urination.—L. E. M., Brownlee, Neb. There is nothing whatever in your communication indicating any affection of the kidneys. The trouble you complain of far more likely has its seat somewhere in the urinary passages, perhaps in the bladder. An examination by means of a catheter will probably reveal the cause. Ask a veterinarian to make the examination.

A Lame Horse.—J. S., Tipton, Iowa. Your horse appears to be lame from navicular disease. Consult the FARM AND FIRESIDE of December 1, 1900, and of November 1, 1901. The shrinking, or atrophy, of the muscles of the shoulder is not the cause, but the consequence of the rather severe and long-continued lameness. It is a concomitant of any chronic lameness having its seat in the foot. Its direct cause consists in the decreased activity of the muscles of the lame leg.

Facial Paralysis.—M. H. F., Redcreek, N. Y. The facial paralysis of your colt is due to an injury and paralysis of either the nervus trigeminus (fifth nerve) or the nervus facialis (seventh nerve). If it is the former the case must be considered as incurable; if it is the latter, which is of much more frequent occurrence than the former, and which is more probable, since, as you say, the lips are much paralyzed, there is some hope that time will effect a recovery, especially as your animal is young and not yet four years old. Treatment and external applications of blisters and other things are useless. Feed food that can be taken hold of with the teeth.

So-called Sweeny.—D. W. R. If your horse is not lame—you do not say whether he is or not—exempt the same from all kinds of work, but allow him all the voluntary exercise he is willing to take, do nothing whatever to the shoulder, and in from four to eight months your horse will be all right. If, on the other hand, the animal is lame, either the lameness is somewhere else, and the so-called sweeny consists in an atrophied condition of the shoulder muscles, or the paralysis is sufficiently extensive to cause the horse to limp. In the first case the seat of the lameness must be ascertained and the cause of the lameness removed if possible, and in the latter case the animal must have strict rest until the lameness has disappeared.

Colt Wounded on the Fore Leg.—J. G. N., Bavaria, Kan. If when your colt was wounded, possibly by the horn of a cow, you had at once made a lower opening, to enable the exudates to escape from the bottom of the downward-extending wound, you very likely would have had no trouble in bringing the same speedily to healing, provided the carbolic-acid solution you used had not been stronger than about three per cent. If the joint (I suppose it is the elbow-joint you mean) really was opened, so that the synovia escaped, and the colt has now, after the wound was finally brought to healing by the formation and breaking of an abscess three inches below the original wound, no use of the leg on account of an ankylosis formed in the elbow-joint, nothing can be done and the colt will remain crippled for life.

Horse Yawns.—H. M. P., Jessamine, Fla. Some horses yawn after having consumed an abundant meal when quietly standing in the stable, but more frequently yawning is observed in horses suffering from a slight indigestion, which is probably the case with your horse. I come to this conclusion because you say that your horse, in spite of liberal feeding, is not thrifty or does not fatten. My advice, therefore, would be to keep the animal on a rather light diet of easily digestible food. If a horse is constantly fed more than he is able to digest he will not improve in condition, but will get poorer and poorer, and finally emaciate. Yawning may also be observed in certain cases of influenza and in intoxications with narcotic medicines. If the excrements of your horse have a fetid smell you may safely conclude that the same consumes more food rich in nitrogenous compounds than he is able to digest.

Two Hard "Lumps."—O. R., Cordova, Md. You say that your cow, six years old, has two hard and movable "lumps," one on each side of the neck and in front of the point of the shoulder. As some people apply the term "lump" to any kind of an enlargement, swelling, tumor, cyst, morbid growth and even an exostosis I am unable to decide what may be meant unless the "lump" and its peculiarities are described. It is possible that in your case the "lumps"—of which you say they are hard and movable beneath the skin—are fibroid tumors, caused, perhaps, by severe or repeated bruising. If such is the case they can be removed by a surgical operation, to be performed by a veterinarian, and do not in the least affect the milk of the cow.

Contracted Hoofs.—W. J. R., Hudson, N. Y. Your horse has never been foundered, because a horse that has been foundered will not have contracted hoofs. If the feet of your horse are yet tender, the best advice I can give you is to keep the horse barefooted (unshod), if possible, until the contraction has entirely disappeared, which probably will be by next spring. If this is not possible have the horse shod by a competent horseshoer (I mean one who is perfectly familiar with the anatomy and the mechanism of the foot of a horse, and at the same time has good common sense) with shoes a trifle too narrow in the heels and in which the upper surface of the heel ends is a little sloping from inward outward, because such a shoe will have a tendency to gradually spread and to widen the quarters, and then do not neglect to have the shoes reset and refitted at least once a month. A shoe that is only a trifle too wide in the heels will cause more and more contraction, particularly if frequent resetting is neglected.

Discharge of Blood from the Rectum.—J. W. Z., Hornbeck, La. All that can be learned from your statements is that your heifer suffered from, and probably died of, hemorrhage in the large intestines, but most likely in the rectum, but there is nothing whatever in your statement indicating whether the same was caused by a mechanical injury or by a morbid process resulting from an infectious disease, like anthrax or so-called Texas fever, both diseases which, in the South at least, are often called bloody murrain. Wherever anthrax causes such a hemorrhage the discharged blood is invariably black and tar-like, while it is apt to be red where the bleeding is caused by a mechanical injury, the rupture of a blood-vessel, etc. If so-called Texas fever constitutes the cause, the red-colored discharge is not intact blood, but is composed of parts, constituents, of blood, owes its color to the hematin of destroyed blood corpuscles and looks either red or purple. A post-mortem examination most likely would have revealed the cause and the source of the hemorrhage.

Bitter Milk.—A. N., Cadillac, Mich. As possible causes of bitter milk are accused the following: Decomposing food, rancid oil-cakes, spoiled and frozen potatoes and turnips, sour and decomposing brewery grains, large quantities of garden offal (especially turnip and cabbage leaves), fallen leaves of trees, various kinds of weeds, certain garden vegetables, straw of leguminous plants (peas especially), etc., if fed in considerable quantities. But in many cases no such kinds of food have been used, and the milk is not bitter when drawn from the cow, but gets bitter afterward and not until it has been for some time exposed in a vessel. In such cases the bitter taste is due to an infection of the milk with certain kinds of bacteria getting into it from outside sources. The remedy in all cases consists in removing the cause. This is easily done if unsuitable food constitutes the same, but it is not so easy where the bitter taste is the product of the action of bacteria, because in the latter case it is often difficult to ascertain the source of the infection, and the source known, the necessary cleaning-up and the thorough disinfection, too, are often rather difficult.

A Fistulous Abscess.—E. A. S., Saltsburg, Pa. There are two possibilities in your case. One is that the bottom of the abscess, or of a part of the same, is lower than the external opening, and that therefore the pus and exudates are unable to escape, burrow deeper and deeper into the tissues, and thus give the abscess a fistulous character. The second is that the bullet with which your horse was shot two years ago is yet at the bottom of the wound, acts there as a foreign body, keeps up the suppuration, and prevents a healing. Hence, the abscess must be carefully probed, and if the bullet is found to be yet in the wound it must be extracted; and if the bottom of the abscess, or of parts of the same, is found to be any lower than the external opening—as surely will be the case—a new opening, low enough to secure perfect drainage from every part of the abscess, must be made. This done, the undoubtedly callous walls of the abscess must be destroyed. This is probably best accomplished by filling the whole abscess with absorbent cotton saturated with a concentrated solution of sulphate of copper (one to four) in water. In about twenty-four hours the cotton must be removed and the wound or abcess again filled with cotton saturated with a somewhat weaker solution of sulphate of copper. If the solution used is made a little weaker every day by adding a little more water, so that finally the solution is nothing more than bluish-colored water, this refilling of the abscess may be repeated day after day until the healing has made sufficient progress to make any further introduction of cotton impossible.

A CARD.

PARIS SEPARATOR AWARDS.

The De Laval Cream Separators received the *GRAND PRIZE* award at the Paris Exposition, in the name of "SOCIETE ANONYME SEPARATOR," which is the French translation of "AKTIEBOLAGET SEPARATOR," the Swedish name of the De Laval European organization, both names meaning "SHAREHOLDER'S SEPARATOR COMPANY, LIMITED."

The repeated misrepresentation of the VERMONT FARM MACHINE CO. (manufacturers of the so-called "U. S." separator) in this regard, culminating with the malicious falsehood that no such award was made and that the De Laval Company is guilty of "lying" in so claiming brings the matter to a point where common business self-respect demands that some radical action be taken.

We have, therefore, this day instructed counsel to at once take such legal steps as may be justified and proper in the circumstances against both the VERMONT FARM MACHINE CO. and, where practicable, such papers as may have given advertising publication to these false and libelous statements.

THE DE LAVAL SEPARATOR CO.

New York, Dec. 17, 1901.

Profitable Employment

We want several energetic men and women to organize and maintain regular routes for a standard, popular magazine. A number of cities yet to be assigned. An unusual opportunity. Full particulars sent free.

Address W. C. O'KANE, 120 WEST HIGH STREET, SPRINGFIELD, OHIO

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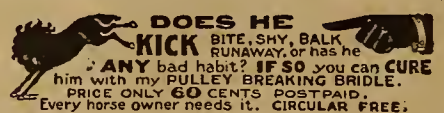

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THE GRANGE

Conducted by Mrs. Mary E. Lee, New Plymouth, Ohio

Religion, morality and knowledge, being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.—Dr. Manasseh Cutler.

Current Comment

National Grange Our readers no doubt ere this have had full particulars of the unparalleled success of the National Grange meeting in Lewiston, Maine. The meeting in point of interest, numbers and pains taken to make it a noteworthy one is beyond all precedent. Everything was done on a magnificent scale. Thousands of dollars were spent by the Lewiston and Auburn Board of Trade in receptions, excursions, decorations and illuminations. The Wednesday evening reception excelled anything ever given before. Governor and Mrs. Hill, Congressman Littlefield, National Grange officers and other prominent people received in evening dress.

The decorations of the hall were furnished by local granges and arranged by a professional decorator. The regalias of the degree teams were resplendent. Nearly three thousand took the seventh degree. Over one thousand more had paid their fees and received their certificates, but were prevented from coming because of the fearful snow-storm. The beautiful and impressive seventh degree took two sessions, so large was the class that all could not be initiated at one time. More than six hundred took the sixth degree. It was impressive and the work splendidly executed. The degree teams for the fourth degree did such excellent and perfect work that all who saw it were loud in praise.

But with all the honors which the Maine people delighted to render the Grange, the best thought and energy were given to regular grange-work. The reports of the thirty state masters show increase in membership and the more gratifying feature of closer co-operation. One hundred and ninety-three granges have been organized and reorganized. The total receipts for the year were $21,936.69; the total expenditures, $17,572.39; indicating a gain of $4,364.30. The four largest payments for dues were by New York, $2,045.41; Maine, $1,363.19; New Hampshire, $1,195.83; Michigan, $1,047.33. This indicates the relative position of these states in grange membership. There are over $60,000 in the Grange treasury.

Grange day at the Pan-American was highly successful. The Temple of Music was crowded with an eager and attentive audience. Addresses were made by the National Master and Lecturer and other prominent Patrons.

A number of states reported gratifying success with the "Woman's Work Committee."

Ninety per cent of New England farmers are members of the grange. Is there any connection between this fact and the favorable legislation Eastern farmers secure?

State Master E. B. Norris said that New York had over sixty thousand members and the order was very prosperous. It was increasing in influence and power. It dealt with live questions. The grange was teaching its members to have more confidence in each other. Organization was the keystone of success. Boys and girls should be induced to join and learn what fraternity meant. It would then be a means of a nobler manhood. Officers of agricultural societies in New York were coming to act in concert. These organizations would all be combined, with the grange for the central force.

The report of the executive committee was inspiring. Below we give excerpts:

Our agricultural people by well-directed and intelligent co-operation are fast removing the isolation that has been the greatest barrier against organization among the farming class, and the grange stands to-day pre-eminently at the head of all other agricultural associations, and shows its power to the greatest advantage in its genial sociability and educational advantages, where it wields the most influence.

If the farmer of to-day hopes to keep pace with the progress of the twentieth century he must become a factor in elevating his occupation. Life in this world is but a school of observation and experience.

The grange is exerting an influence in public affairs, and is valuable to every member morally, socially, educationally and financially. From all parts of the country comes the report from our grange-workers that the great army of husbandmen are falling into line.

Organization and co-operation are watchwords of the hour, and they will insist on an equal distribution of the burdens and an equitable share of the many blessings accruing from an advanced civilization. The magnitude of the agricultural industry requires a thoughtful provision to secure an adequate consideration for its products in the markets of the world.

President McKinley in his last address, referring to this, said: "The time of exclusiveness has passed. We are a nation that produces more than we consume, and hence we must look to other nations to take our surplus, and we in turn must be willing to make an equitable balance."

The extension of our markets for our farm products abroad, the passage of the Grout Bill, and a federal law regulating trusts, are subjects that should receive immediate attention, and our claims be continued with redoubled energy before this Congress. The grange has passed the point where it needs any excuse or apology. It has entered upon a period of solid growth and prosperity, and will continue to be a factor in all the problems that affect the interests of the American farmers.

The pronouncement against irrigation of arid lands at government expense was spirited and forcible.

WHEREAS, The one great burden on the farming interests of the United States consists in the perpetuation of the superannuated policy of the government giving away its arable lands to anybody and everybody who will occupy them, thereby constantly maintaining and increasing a most unfair competition with farmers already established, and diverting to the far West thousands of men who would naturally furnish the much needed force of labor for farmers who have bought their lands and paid for them, or agreed to pay for them, and

WHEREAS, This injury would be continued for many generations longer, should any project be adopted for bringing into a cultivable state the immense tracts of the public domain now arid, therefore be it

Resolved, That this body, representing in large measure the agricultural interests of the whole country, denounces all projects for irrigating any portion of the public domain.

The Nicaragua Canal was strongly indorsed to curb railroad greed and give shorter route.

The Ship Subsidy Bill was opposed.

The election of senators by direct vote of the people was advocated.

National Master Jones was unanimously re-elected, as were all the principal officers.

Geo. B. Horton was elected High Priest of Demeter.

The next National Grange will be held in Michigan.

Report of O. Gardner

The report of O. Gardner, Master Maine State Grange, is of peculiar interest because of the magnificent grange-work done there, and because it indicates clearly the possibilities open to every state. We omit agricultural statistics.

In our state it can be truly said that the grange has been the direct instrument in bringing together the most intelligent and progressive farmers, until to-day the grange is recognized to be as stable and as well poised as any of our departments of state. No one can travel over Maine without being impressed with the wonderful advancement of our rural people through the instrumentality of the grange. Organization has broken down the spirit of jealousy which has so frequently been the bane of rural life and so changed the sentiment of our people that it is easy to tell by their appearance and manners whether they have a grange in town or not. The testimony is universal that the influence of the grange is breaking down bitter partizanship, promoting unity and furthering the best interests of the town, county and state. We might go on and fill the Journal of Proceedings of the National Grange with what the order has accomplished, but will only note one or two of its recent achievements from a business standpoint. Our fire insurance companies are carrying over $11,000,000 of risks on farm property, and are agencies for a safe, sound and cheap means of insuring the same at a very low rate, about one fourth of one per cent for the past five years. This has saved many thousands of dollars to the Maine farmers. Although we have comparatively few "grange stores" many of our subgranges and members are getting great benefit financially by clubbing their orders and buying for cash, thus getting the full benefits without the risk of running stores. Our state grange store at Portland is recognized as one of the solid business houses of the state, and is the means of great financial benefit to the order in Maine. Several years ago the Maine State Grange began the study of our tax laws, with the one purpose of bringing about a more equal distribution of the the tax levy on all property of the state. Last winter the legislative committee of the state grange were instructed to appear before the legislature and try to effect certain legislation along the line of equality in our tax laws.

Without giving details it will suffice to say that the success of our efforts will add hundreds of thousands of dollars yearly to the treasury of the state from sources not previously taxed proportionately with farm property, and the end is not yet. It is but just to say that the straightforward policy of the state grange and legislative committee won an immediate response from the state legislature and insured earnest co-operation on the part of the leaders in all parties. But better than all else has been the great lesson to our own membership of the value of co-operation and power of organized effort. It has given us more faith in ourselves and in each other, awakened us to the possibility as well as necessity for persistent co-operation, and as a consequence our order is to-day broader, stronger and more firmly intrenched than ever before in its history.

I can perhaps give you no better idea of the stability of the order in Maine than to say that in this one county of Androscoggin, where lived and died that grand old man Brother Nelson Ham, our first Worthy State Master, and where subgrange No. 2 still flourishes in the limits of this city, and where you can scarcely go fifteen miles from this point without going out of the county, we have forty-four hundred members who own about fifty thousand dollars of grange property in the form of substantial halls.

All over Maine, by the side of the school-houses, at the corners of the roads, stand two hundred and sixty grange halls, built and owned by the incorporated grangers and representing a cash value of nearly six hundred thousand dollars. In a rapidly increasing number of these halls we may find libraries made up of carefully selected books, lending their influence and potential power in strengthening that true home atmosphere which lends a charm to the weekly gatherings.

Our membership at the present time is about 30,064. I cannot tell exactly at this time. The order was established in Maine twenty-seven years ago, and during this long period the year of 1901 will go down in the history of the order as the first time the National Grange has honored us with its presence and inspired us to greater effort for the future. I would ask if we can exist twenty-seven years longer without the presence of the National Grange, what do you think will be the effect should you visit us at least once in a score of years? Trusting both pleasure and profit will come to the National Grange in consequence of this session, and that you will find it to the advantage of the national body to come again, I am, fraternally,

O. GARDNER, Master.

ADVISING THE YOUNG MAN

This is usually the most difficult problem to parents, ministers, professional men and others to whom young men come for advice. Each and every one has this question to solve from time to time, and is often at a loss what to do. It is a rule that "he who helps another to help himself, helps him best." We are in a position to answer this problem in this way. We would be pleased to correspond with parents and others and acquaint them with our plan to help a young man to help himself. Through the generosity of the founders of the school, and several prominent manufacturers, the Trustees are able to offer each year a few Free Scholarships in our Engineering courses to deserving, energetic and intelligent young men.

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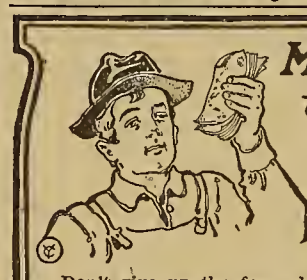

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Wash-day in Winter

BY SUSAN BROWN ROBBINS

THIS is the way one woman manages. She is in good health, but she knows she must take care of herself in order to keep so, and she has a family of four grown people. She has no set tubs, and requires about half an hour's help from the man of the house in doing the family washing. This is easier and cheaper than to put the washing out or to hire some one to come and do it. If she had set tubs and hot and cold water she could do the work alone and do it easily. As it is, her clothes look and smell clean, and she does not get very tired.

This is the record of one cold Monday in January: She arose early and set about getting breakfast. The night before she had a bar of naphtha soap shaved thinly and put in an agate kettle with cold water to cover. She then added warm—not hot—water, and set the kettle on a part of the stove where it would be warm enough to dissolve the soap, but on no account to boil, and from time to time she stirred it with a stick. Just before breakfast was ready she had the boiler, which was two thirds full of water, put on the hottest part of the stove. Immediately after breakfast, while she was clearing the table, the man of the house filled the tubs, put on the wringer and refilled the boiler. The dishes were packed up ready to wash, and then the kettle of dissolved soap was emptied into the tubs.

The clothes were picked over, and the white ones and light-colored flannels put in the large tub and pressed under the lukewarm suds, and the colored things, with the exception of any piece that might stain, or calicoes which might fade, put in the other tub. She prefers to wash colored prints with some good white soap, but on this occasion everything was put in the tub.

During the thirty minutes allowed for soaking she swept the kitchen—the washing was done in an unfinished back room—watered her plants, and did the chamber-work with the exception of making the beds, the covers of which were laid open to let them air. She had filled the lamps in the intervals of breakfast-getting, and by eight o'clock the housework was all done with the exception of the breakfast-dishes and the beds.

She began on the washing as the clock struck the hour. Each piece was passed through the wringer, and if there were soiled places they were scrubbed a little on the board or between the hands. Some things were wrung twice, and then needed no scrubbing.

It took about an hour to get everything through. The white things, flannels and colored clothes were laid in piles by themselves. Now was the time for a man's strength again. While the tubs were being emptied and refilled she made the starch. Then, with warm water and the man turning the wringer, she began the rinsing. White clothes, flannels, and lastly the colored things, were rinsed, only a few articles being put in the water at a time, and those well "sozzled" around. Everything was rinsed a second time, then the things starched that required it.

At just half-past nine the washing was done, ready to hang out. She knew it was not prudent to go out into the cold air immediately, and that was one reason why she had left the dishes. She washed, wiped and put them away, then carefully dried her hands and rubbed cold cream into them, put on warm outer garments and mittens, hung a clothes-pin bag around her neck, and went out to hang the clothes on the line.

At fifteen minutes after ten all the things were flapping stiffly in the freezing wind. She came into the house, and without taking off her outside things, though she replaced her damp mittens with a dry pair, went and made the beds. Then she took off her things and sat down in the sitting-room to rest. It was just half-past ten, and the washing and housework were all done, and she need do nothing more until it was time to get dinner. She did not feel very tired, as the outdoor air had refreshed her, and her hands felt warm and dry and were not chapped or cracked or been chilled at all.

It might seem silly to some people to warm the rinsing-water. Although it is a little more work it gets the soap out better, makes the clothes whiter, and she knows that to use ice-cold water is to invite rheumatism. It is for this last reason that she puts up with the awkwardness of mittens in hanging out clothes and in bed-making. There is rheumatism in her family, and a few twinges in her own hands and fingers have warned her to have a care.

As to boiling the clothes she says, "I never tried naphtha soap till this winter. I don't know how it will be in summer when the clothes are so much more soiled, but so far this winter it works to perfection, and the clothes are cleaner than when I boiled them."

She watches the clothes, and as soon as they are dry she brings them in. She does not leave them out over night, even if some of the heavier things are not dry, for the weather is uncertain in winter. If some of the flannels are very damp she hangs them "in the attic" to finish drying.

A Home for Girls

That the education of no young person at the present day is complete without a practical side to it is a fact constantly meeting with fresh recognition. In the judgment and wise forethought brought to bear upon the foundiug and management of the "Little May Cottage" another proof of this is shown.

The "Sheltering Arms," an institution located in the city of New York, has for a long time acted the part that its name implies in caring for homeless and destitute children. However, its most interesting feature, as recently stated in a New York journal, has been for some years the "Little May Cottage," endowed and named in memory of May Carey, who died at the age of ten years. Its endowment fund of fifty thousand dollars was given by Mrs. John Carey, Jr., and was sufficient to make practicable the establishment of a more complete and permanent home than any part of the institution had up to that time been able to afford. The Cottage, therefore, is a household of itself, composed of twenty girls. These may be admitted at the early age of six years, and may remain until they are seventeen or eighteen.

All the necessary work of this home —for it is a home in the truest sense of the word—is performed by its inmates, as there are no servants. There is a matron, or housekeeper, as she is called, but the entire management of it is accomplished by the older girls, of whom there are generally four or five. The last two years of their stay at the Cottage are given up to a thorough course of domestic training. This is entered upon after the regular school course is accomplished, and they are called "home girls."

The younger ones, in addition to their ordinary school duties, have simple household tasks assigned them. These are clothed by the institution, but the "home girls" having the Cottage in charge receive a compensation in money for their work, and also such instruction in the rules of good taste and economy as enables them to do their own shopping creditably. They are also taught to do the home marketing.

An important point is made of sewing, and all mending is neatly done by the girls. When natural aptness in any department is shown, special instruction is bestowed along that line, so that not only good dressmakers, but many skilled in different kinds of fine needlework, as well as those trained in all the other departments of domestic science, go out from the Little May Cottage to fill places of usefulness in the world.

In accordance with the wish of Mrs. Carey, who at her death left funds for the purpose, each girl at the completion of her first year in the institution receives a silver spoon marked with her name, and this is presented upon the birthday of Mrs. Carey.

Although it is claimed that girls are not trained here merely for domestic service or at least that this is not the nominal end in view, yet through some impression to that effect held by the public constant application is made to the Cottage for servants. But it is no doubt true that some of those who have from time to time gone out from it could have creditably filled almost any position in life to which they had been called. A part, at least, of its curriculum might well stand as a working model to be copied in the private homes of both the rich and poor.

LILLA A. WHITNEY.

A Few Items Concerning Babies

Do not touch or take your baby in your arms when you are nervous. Take a walk, wash the dishes, pray, do anything rather than touch the baby, until you feel better. If the little darling is taken up he feels your nervous strain, and is thereby rendered cross and miserable.

Next it is not always necessary for the little one to obey your commands. It has its little rights, and there are times when you would be intruding upon its best feelings were you to insist upon having your own way. On such occasions you might say to the baby, "Oh, never mind; mama will let her little darling have his own way this time," then kiss him, and a confidential friendship is at once established between mother and child, as between nurse and child. A nurse should ever be mother to the child's best feelings.

As there may be young mothers who are sweating over the baby's bath, in danger every moment of letting the chubby little fellow fall from her lap, I will tell about a mother who bathed her baby in what I believe to be the ideal way. The mother I allude to drew a little pine kitchen table in front of a good fire, covered two thirds of the top of the table with a quilt or blanket, and left the other end of the table for the wash-basin, soap and powder. Then laying her baby on the blanket, she would undress, bathe and redress him without tiring herself or endangering the baby in the least. The baby in the meantime kicked, laughed, exercised and received the rested mother's caresses, and it was not more than ten minutes later when the baby was peacefully sleeping.

MARY E. P. HOLMES.

Our Thursday Club

Last Thursday occurred the first regular meeting of our club for the season, the meetings having been discontinued during the hot weather. We call this a club, although we have no officers, no organization and no set plan of work. We just meet every Thursday at two o'clock, bring our work, especially stockings to darn, and any little item of general interest which has appealed especially to us in our reading during the week is read and discussed informally at these meetings. Sometimes we read a new book, and items of interest to housekeepers and homemakers are always coming up for discussion. The general plan, if plan it may be called, is to spend the first half-hour in social chat, then an hour in reading and finally an hour in discussion of what has been read and a general interchange of ideas. We are all too earnest and have too many interesting things to talk about to waste time on neighborhood trifles.

At this meeting some selections were read from the "Outlook" on "The Making of an American." After some informal talk suggested by the reading, household topics came up. One grandmother who was present gave her receipt for making a mustard-plaster, which she said she had used for a great many years. It was as follows: One teaspoonful of ground mustard, five teaspoonfuls of flour, and molasses enough to moisten so it may be spread. Care should be used to not make it too wet. "Make it not quite as stiff as gingercooky dough," she said. Spread the plaster very thinly on a piece of muslin and apply it where needed, with the plaster side next the skin. Smooth it down carefully and it will stay where it is put. This plaster may be left on several hours or all night without causing a blister, and does not become dry. For a child do not use more than half a teaspoonful of mustard to five of the flour.

The next thing mentioned that was new to me was an apple pudding. Pare, quarter and core as many tart apples as will cover the bottom of a shallow pudding-pan, crowding them closely together. Sprinkle granulated sugar over the apples, and dust a little cinnamon over them if you like. Pour in a few spoonfuls of hot water, according to the size of your dish, just enough to start them cooking, and set the dish in the oven. Serve with plenty of cream. If you want to make the dish look a little extra make a meringue of the whites of two eggs, spread it over the apples when they are done and return to the oven long enough to begin to color a light yellow. I have tried this receipt, and the result was pronounced a decided success by the family, and a great improvement on the old-fashioned baked apples.

Another item of interest mentioned which appealed to me was the use of the legs of black stockings to draw on over the sleeve of the gown, to save them from wear or soil. These are fastened at the top by a rubber band. I have always been racking my brain to find uses for these stocking-legs after the feet were worn beyond repair, and yet had never thought of this use.

MAIDA McL.

That Dinner-bag

Nearly every woman or girl who has to carry a lunch-basket dislikes to do so, and after a careful study of the matter I invented a dinner-bag that does not advertise itself. The foundation of each is a two-pound coffee-can, the entire top of which forms the cover. When the bag comes home the can is removed and washed, ready for the next day's lunch.

Suppose that the first bag is made for a schoolgirl and it is covered with cardinal art denim. It is made as follows: Place the can upon a piece of pasteboard, and mark around it. Cut out this circle and cover neatly with the denim. The best way is to cut a circle of the goods two thirds of an inch larger all around than the pasteboard. Gather closely near the edge, using a strong double thread, place the pasteboard upon it and draw up tightly. Sew across from side to side to hold in place. Cut a strip of the goods eighteen and one half inches long and fifteen inches wide. Sew up the ends, turn down three inches at the top and stitch twice, leaving an inch heading and an inch between the stitchings. Turn up half an inch at the bottom and overhand it to the circle already prepared. If desired, a design, monogram or initials can be embroidered upon the front before the bag is made up. Use inch-wide cardinal ribbon for the draw-strings. Cut two pieces from small-sized clothes-line or very heavy express twine fifteen inches long, and two strips of denim sixteen inches long and wide enough to cover the rope. Cover the rope neatly, and turn up the ends of the goods that extend below the rope. Sew these handles five inches from the bottom, or an inch from below the top, of the can. They should be placed three inches apart, so as to form two bails. This will make the bag hang level and not swing to one side. Slip in the can and the bag is ready for the lunch.

I made several of these for Christmas gifts, and in each placed one of the smallest-sized, covered jelly-glasses. The cans used measured five and one half inches across, seventeen inches around and six inches high.

For an elderly lady who works in a dressmaker's shop the bag was made of black silk, faced at the top with yellow

satin, and a double rose, two buds and leaves worked upon the front. For a stenographer who usually wears navy-blue the cover was made of blue serge, with daisies and leaves worked upon it. For a schoolgirl the cover was made of gray linen cut in four strips, the seams feather-stitched with scarlet cotton, faced at the top with Turkey-red and drawn up with scarlet ribbon. This case could be washed nicely, as could one made of blue art denim and worked with white daisies in knitting-cotton, which also went to a schoolgirl.

The prettiest one was made of light blue sateen covered with knot-stitch crochet made of black silkateen, with the draw-strings of blue satin ribbon. Almost any combination can be used, as can almost any scraps of goods for the covering.

With each bag made for Christmas was two large napkins, to be used upon which to spread the lunch. Those for the schoolgirls were made from very fine cheese-cloth, with the deep hems feather-stitched with Turkey-red cotton. For the elderly lady they were two large butcher-linen napkins, with hemstitched hems and her monogram worked in white. The two young ladies had hemstitched napkins, with sprigs of violets or forget-me-nots in the corners. Each bag had two cans, so that one could be airing all day while the other was in use.

MRS. H. L. MILLER.

Lace-making—Modern Laces

The lace of to-day may be divided into three groups—point-lace, pillow-lace and machine-made lace. Of these the first, the real point which is made by the needle alone, is still made in large quantities. Brussels point is still produced, and so is the famous point d'Alencon. It is true the names of these laces have lost their old-time significance, for the lace is as often made elsewhere as in the city from which is derived its name. Point applique is a modern point-lace. In the genuine the flowers are made separate and then applied to the needle-woven mesh. This is often imitated in the machine-made laces.

The amount of pillow-lace manufactured at the present time exceeds that of the point. In the last few years there has been a revival of interest in the work in continental Europe. Perhaps more pillow-lace is made in Belgium than in any other country. It has been estimated that one fortieth of the population of the entire country is engaged in lace-making. While much of this work is done by individuals in their own homes, there are schools where pupils are taken and assistants hired. In these places orders are filled. Members of the nobility or other wealthy persons often give a school or an individual an order for hundreds of dollars' worth of lace. This industry has one bad feature—children are put to the work at too early an age. It often occurs that a girl of ten or twelve will be an expert lace-maker.

Brussels pillow-lace is still made in large quantities. The mode of work has somewhat changed, but there are, as of old, the dainty, separately made flowers. These are made by one workman, while another produces the groundwork, or this last is sometimes machine-made. A third lace-maker fastens the flowers upon the net by a process known as "fine joining." The outline of the pattern is always marked by a heavy stitch. In the pillow-made Brussels this outline is made of a plaited thread, but in the point it is a single thread covered with the most minute buttonhole-stitches.

Valenciennes is another old lace which is made at the present time. However, the principal seat of its manufactory is now Brussels. Maltese is another modern pillow-lace, and there are many other varieties.

The machine-made laces are numerous and well known. Some of them are really beautiful, but of course they are inferior to those wrought out by the patience and skill of individuals. Machine-made lace can be produced at a surprisingly low price. Most of it is made of cotton, although there are a few linen laces, like the torchon. Silk lace is also made by machinery.

Among the modern laces, especially in this country, are the so-called point, the Honiton with its varieties of Princess and Duchess, and the Battenburg. The manner of making these laces is as follows: A pattern is stamped upon cambric. This is usually basted upon stiff paper. Upon the pattern fine braid is basted, to form the outlines and heavier portions of the work. The spaces between the portions of braid are then filled in with needle and thread. A great variety of stitches are used. While, strictly speaking, this cannot be called a hand-made lace on account of the machine-made braid used, yet most beautiful results may be obtained.

Of these laces the point is that made of the finest braid and thread. This is very dainty and much used as an edge for handkerchiefs, ties, collars and other accessories of dress. Honiton is a little coarser. The braid for this has a curved edge, and can be formed into charming designs. Battenburg is coarser, both as to braid and thread. Into this many tiny rings closely covered with a crochet-stitch of linen thread are introduced. Battenburg is much used for doilies, centerpieces and borders for various objects. In some cases lunch-cloths and even bedspreads are made entirely of it. It is also much used for ecclesiastical purposes.

Pillow-lace is beginning to be made in this country. The pillows can be obtained in cities, but the fine flax thread is imported. Aside from its manufactory proving a means of wage-earning it is a dainty occupation for women of refinement and leisure. Many can make for themselves or for their friends bits of lace which they could not afford to buy. While the work is more difficult to learn than the point, it requires only time and patience.

This is not all. In the production of these laces has been a way whereby those who imitate the One who went about doing good may enable the lowly and down-trodden to eat the sweet bread of independence. In the October 15, 1901, issue of the FARM AND FIRESIDE was given a brief account of lace-making among the American Indians.

HOPE DARING.

Chapped Hands

A fine home-made lotion may be prepared weekly in winter (in warm weather it would sour, but hands rarely "chap" in hot weather) by putting a teacupful of bolted Indian meal into a quart of hot water. Let it cool, then bottle. Shake well before using, and rub the hands (after washing till clean with soap and water) with a liberal portion of the meal and water, then rinse and dry well. "I never have clean hands in the winter. I prefer whole hands! Soap cracks my skin," and so on ad nauseum. Even in this day of enlightenment choosing filth rather than cleanliness! Hands well washed, well dried and carefully treated with some simple emollient will not crack and bleed unless one is afflicted with salt-rheum or other skin disease, and then it were better to consult some intelligent physician than to rely upon a home treatment that might properly be called the "old-fashioned dirt cure." "Dirt is healthy" was the wrinkle our ancestors clung to; it may have been true then, it is not healthy now.

KEZIAH SHELTON.

Left-over Sweet-potatoes

The following receipts can be used to advantage in making up left-over sweet-potatoes that were either baked, boiled or steamed:

SWEET-POTATO PONE.—Stir together until very light and white three fourths of a pound of fresh butter and three fourths of a pound of white sugar; flavor with one teaspoonful of vanilla, and add one and one fourth pounds of finely mashed potatoes, with one teaspoonful of baking-powder, the beaten yolks of eight eggs, or the whites of ten eggs if a light-colored pone is desired, and one gill of sweet cream or sweet milk. Mix the ingredients well, place in a deep pan, bake slowly two hours, and serve warm with hard sauce. It is also nice served cold, and can be cut in slices like cake, if so desired.

SWEET-POTATO PUFFS.—Peel and mash six medium-sized boiled potatoes; add two tablespoonfuls of white sugar, one tablespoonful of butter and a little salt; beat until light, turn into custard-cups, filling nearly full, brush the tops with the white of an egg, and bake in a quick oven. Or turn into well-greased gem-pans, and bake quickly for a breakfast dish.

SWEET-POTATO CROQUETTES.—Mash any desired quantity of cold boiled or baked potatoes; mix with a little cream, butter, sugar and a light sprinkling of ground cinnamon, dip in egg, then in bread-crumbs or cracker-crumbs, and fry in hot fat.

SCALLOPED POTATOES.—Peel and slice in thin slices cold baked or boiled sweet-potatoes; put a layer in a baking-pan, sprinkle with salt and lumps of butter, then another layer of potatoes, and when all are in pour on enough sweet milk to nearly cover; cover closely until done.

SWEET-POTATO CUSTARD.—Peel and mash cold boiled potatoes, and to each cupful of the potatoes allow two eggs, one cupful of sweet milk, one teaspoonful of butter, a pinch of ginger, a little grated nutmeg and one half teaspoonful of baking-powder. Line a pie-pan with rich paste, put the well-beaten mixture in, and bake until done. The baking-powder makes the mixture light, and when once tried in potato custards it will always afterward be used.

SWEET-POTATO COBBLER OR PANDOWDY.—Take cold baked sweet-potatoes, peel and cut in half-inch slices, and place in a deep pan lined with rich paste. Spread each layer with two tablespoonfuls of fresh butter, add two tablespoonfuls of sugar and a sprinkling of mixed spices, pour on enough hot water to which has been added one gill of good spirits or domestic wine to fill the spaces between the potatoes, cover with a crust, and bake until the crust is done.

MRS. W. L. TABOR.

Rug-making

"I always get the 'rug fever' in early winter," said Mrs. Allen, "and I have just come from Mrs. James'; she has three new rugs, and is working up material for two more, so I got a lot of new ideas, and think I can improve on any that I have ever made, and perhaps on hers. She had one made of cotton rags—blue, black and brown—cut 'hit and miss' as for carpet, only much coarser, one and one half inches at least in width, or two rags taken together. The rug is two yards long and one yard wide. The weaver furnishes the warp, a very thin chain, so the rags hide the warp mostly, and you have no idea how pretty it is. The weaver waits until she gets orders for several dozen rugs, then puts in this chain. A woolen one made of brown and black mottled with orange and scarlet would be as pretty as a Navajo Indian rug. Some have a border or stripes on each end. One woman has a pair of old chenille curtains woven into a rug, and it is handsome. Not every one has an old ingrain carpet to cut up and make into a rug, but every one can get four or five pounds of rags, and that is what it takes to make a good one. They are so easily made and cost very little, just the regular price a yard that rag carpets are.

"I intend to make one out of heavy cloth—old pants, vests, etc.—pieced together as is done for crazy-quilt, and line it with coarse canvas stretched in quilting-frames. Then I can cover the seams with feather-stitching of bright yarns, and even put some figures on the darker pieces. I have made several on canvas of coffee-sacking stretched firm in quilting-frames by drawing the rags through with a hook. I made my own hooks of hickory wood or from the back of a coarse rubber comb. I have flowers or figures, and draw my own patterns with a stick of blackboard crayon moistened with a little water. I have a pretty one with roses and leaves on a white ground and dark border, and another with pansy and other flowers on a gray ground. It is hard, tedious work, but one can use every scrap of worsted cloth or yarn that would be useless for anything else. There are machines to do such work, but one must have good rags or yarn for their use.

"Mrs. Roberts' hobby is braided rugs. She has such handsome ones in black, blue and shades of gray. Her husband wears gray suits generally. I'll never be content till I have at least one good braided rug to remind me of my grandmother's days. They are so durable, thick and warm.

"I saw crocheted rugs at Mrs. Edwards'—great mats, large as wagon-wheels—made of cotton rags. They say her daughter does it. I have seen children knitting rags with wooden needles—in strips a foot wide perhaps—to be sewed together.

"Mrs. Henry makes rugs of gathered rags. She cuts them on the bias about three fourths of an inch in width, gathers them through the middle with coarse wrapping-yarn or carpet-warp, and has them woven; they look like the drawn rugs, and are alike on both sides."

VESTA C. TURNER.

Sunday Dinners

Most housewives prepare only two meals on Sunday, with a lunch in the evening, and of course they want an extra good dinner, but do not want to stay home from church to prepare it. When the family have to wait an hour or more for dinner they are very apt to eat too hurriedly and too much, and consequently are troubled with a headache the rest of the day.

We need to learn to prepare this meal beforehand, so far as possible. With a little forethought this can be easily done, so that the Sunday dinner can be ready in fifteen or twenty minutes after getting home.

Roast chicken and mashed potatoes or roast beef and browned potatoes can be used for the substantial part of the dinner. Baked beans also make an excellent dish for this meal. Clean and stuff the chicken on Saturday, putting it away in a cool place. Every housekeeper should have a good roaster, a self-baster being the best. Before going to church place the chicken in the roaster, or the beef with the potatoes placed around it if this dish is used. The oven should be quite hot when the chicken is put in. After doing this fix the fire so that it will give out a moderate heat. You will soon learn to do this so well that this part of your dinner will be nicely done.

Put the necessary water in the tea-kettle, and place on the stove. If you intend to have mashed potatoes, peel the potatoes, cutting in rather small pieces, while you are getting breakfast, put them in the pot, and cover with cold water. Celery should be cleaned the day before and placed in water, and all canned fruit should be opened and emptied into dishes beforehand. The table should be set as you are washing the breakfast-dishes.

As soon as you get home, before you change your clothes, pour the cold water off the potatoes, pour on sufficient hot water from the tea-kettle and place on the stove. By doing this they will be done by the time the other things are ready. Make the coffee, and then you will have nothing to do but warm up the baked beans, which have been previously prepared, and mash the potatoes. Puddings baked the day before can be used as dessert instead of canned fruit.

PANSY VIOLA VINER.

A "Left-over" Consomme

Put into the bottom of your soup-kettle the green tops or remains of a celery-stalk, four whole or two cupfuls of stewed tomatoes, four or five whole cloves, salt, dashes of cayenne and black pepper and two inches of stick-cinnamon for seasoning, and lastly add two cupfuls of cold baked beans, pork and all. Cover all with boiling water, and cook slowly two or three hours. Strain through a coarse sieve, and serve with croutons. These latter are made as follows: Stir one cupful of flour into two thirds of a cupful of boiling water, and when cool thoroughly beat in one egg. Fry in deep fat, and skim out on brown paper.

Cheese Sandwiches Served With Salad

Cheese sandwiches are always good to serve with salad. Grate any cheese and rub to a paste with butter, then spread the bread, dust with salt and pepper, and cut into strips.

About half the lamp chimneys in use have my name on them.

All the trouble comes of the other half. MACBETH.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.
MACBETH, Pittsburgh.

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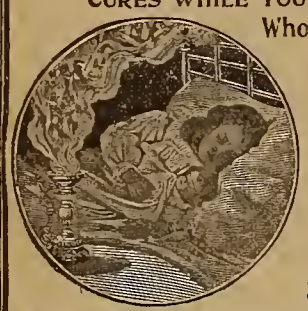

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Invitations and Society Notes

TO WRITE an easy, polished note is an accomplishment to be desired in these days, when so much of our social intercourse is carried on through these dainty missives. To send out a note lacking in formal elegance or kindly courtesy is to be judged ill-bred, or at least unused to the best social usage, for note-writing, not without cause, is considered a crucial test of early education and advantages.

When inviting company in honor of a guest or favored friend the words "To meet" should be written at the head of the sheet and the guest's name immediately after. Mrs. Irving and daughter, inviting a company to meet their friend Miss Morton, who is about to be married, word their invitations as follows:

To meet
Miss Alma May Morton
Mrs. and Miss Irving
request the pleasure of your company
on Thursday evening, January third.
Kitchen shower.

A formal invitation sent out by The Comfort Club is as follows:

The president and members of
The Comfort Club
request the pleasure of
Miss Helen Blackfen's company
at a reception
to be given at the club-rooms
on Thursday, December twelfth,
from eight to eleven.

The following invitation is sent out by the St. Mark's Students' Club of New York:

You are invited to be present at
a meeting of the
St. Mark's Students' Club
on Thursday evening, May second,
at 7:30 o'clock.

There will be an exhibition of the winter's work by the students and an address by the Hon. Hamilton W. Mabie.

The favor of an answer is requested.

The Seamen's Christian Association send out this invitation to their friends:

You are cordially invited to attend
a grand concert
by the crew of the steamship "Celtic"
(Captain Lindsey) and friends
on Friday evening, October eighteenth,
at 7:45 o'clock.

An informal invitation to dinner should be worded as follows:

MY DEAR MRS. WELCH:—
We are inviting a few friends to dine with us on Monday quite informally. Will you and Mr. Welch give us the pleasure of your company? We dine at six.
Very sincerely yours,
HARRIET PUTNAM.

The reply accepting the invitation should be:

MY DEAR MRS. PUTNAM:—
Mr. Welch and I shall be pleased to accept your kind invitation to dine with you and your friends on Monday at six o'clock.
Cordially yours,
MYRA WELCH.

In these society notes and also in formal letters it is more elegant to address your friend as "My Dear Mr. Brown" or "My Dear Miss Smith" than to write simply, "Dear Mr. Brown" or "Dear Miss Smith," which is considered more familiar.

In writing these society notes the date is placed at the close, and not at the beginning, as in the case of a letter. To write "Sincerely" or "Cordially" and omit "Yours" shows a lack of courtesy or ignorance of rhetorical form.

A common error is to close a note with the words "Trusting this may find you well" or "Hoping you are disengaged, believe me, sincerely yours." The clause in this case has been left without a subject, and the participle has been named "the dangling participle." A courteous and correct form would be, "With the hope this may find you disengaged, believe me, sincerely yours."

Rich white paper with good black ink is always in good taste. A heavy plate-paper cut square is suitable for notes. A more fashionable paper is the French organdie bond. The newest style for this season is French organdie quadrille in white, pearl-gray and blue.

FRANCES BENNETT CALLAWAY.

Cured—32 Years of Awful Pile Agony.

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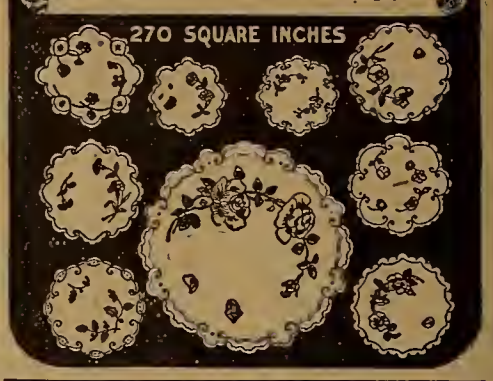

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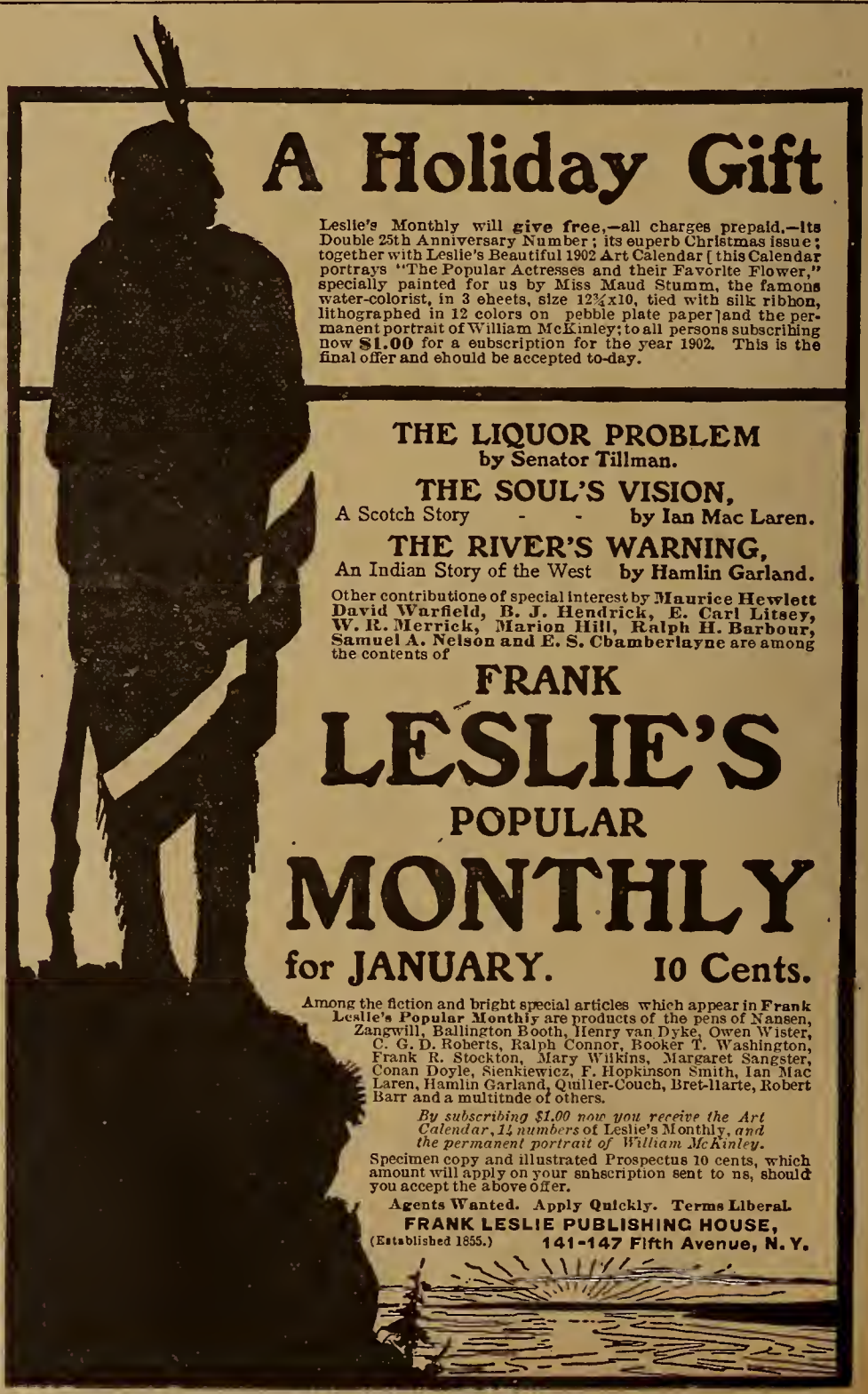

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All of the Dears Love I

The butterfly, in love with rose,
Must round it hover and hover;
The sunshine, in love with the butterfly,
Is just such another lover.

But whom does the rose love? Tell me that,
You who good guessers are;
Do you think it's the singing nightingale,
Or the little quiet star?

I know not whose is the rose's heart,
But all of the dears love I;
I love the sunshine, the bird and the flower,
The star and the butterfly.
—John Vance Cheney, in The Delineator.

The Secret of Popularity

I ATTENDED a funeral the other day that impressed me very much. The dead man had been a physician and surgeon, and had only lived in the world twenty-nine years. And yet the large house, at a busy hour of a busy day, was crowded almost to suffocation, the porches and approaches to the house were packed with people, and the dooryard and clear out to the sidewalk and into the street were crowded with people who got as near as they could.

I had known the man very well during his life and I therefore knew the secret of all this excited interest at his early death. After graduating from a good college he had by hard work managed not only to give himself the best medical education to be had in this country, but had been by great self-denial and heroic work on his part able to finish his education at the best schools in Europe. Five years ago he returned to his work in this country magnificently equipped to do splendid service.

This young man seemed to have a genius not only for medicine, but for surgery, and the greatest physicians of the city prophesied for him a marvelous career. The best practice came to him, and money poured into his lap. Many men under such circumstances would have been so puffed up and inflated that they would have withdrawn themselves from the poor and have become cold and exclusive. But this man was a real physician. He had a passion for conquering pain. Every case that came into his hands absorbed him, and he seemed to be happier when easing the pain of some poor old washerwoman, or setting the arm of a little newsboy run over in the street, than at any other time. His life was poured out like water to comfort and help. He was a giant in stature, and his great heart bubbled over with kindness and good cheer. Every look of his face and every movement of his hands were helpful. The result was that in five years he had tied more people to him in bonds of love and devotion than many strong and brilliant men would have gathered about them in fourscore years and ten. At his funeral rich bankers, fashionable ladies and learned scientific men elbowed with clerks and newsboys in the common feeling of grief at his loss and to do honor to the man whom they loved, because of the helpfulness he had brought in their time of need. The secret of all true and real popularity is in whole-hearted, loving service. And that is orthodox, for does not the Scripture say that we love Christ because "He first loved us?"—Current Anecdotes.

Humble Origin of Great Men

Jeremy Taylor, the greatest preacher the Anglican church ever produced, and the author of "Holy Living and Dying," was the son of a barber. He was born in 1613, and died in 1667.

Francis Asbury, the great leader of the pioneer forces of American Methodism, was the son of a gardener, and himself served the apprenticeship of a saddler.

Kitto, the great biblical scholar, was the son of a bricklayer. From this humble position he learned to lay the foundations of biblical learning and scholarship.

George Fox was the son of a shoemaker. Out from this position he went with his feet shod with the preparation of the gospel of peace.

Haydn, who afterward became the great composer, was the son of a carpenter.

John Bunyan, the author of the world's great allegory, was poverty's gift to the church.

Zwingli, the Swiss reformer, came from an Alpine shepherd's home.

Luther was the son of a poor miner, and at one time made his bread by singing from door to door.

Claudius Buchman, whose "Star in the East" led Judson to Burma, was a poor boy picked up by John Newton, and recommended to a rich man as worthy of an education.

Socrates, the Athenian philosopher, was the child of artisans, and was himself an artisan during his youth.

Jacob Boehme, the great German philosopher, was born of poor parents, and was apprenticed to a shoemaker at an early age.

Shakespeare sprang from humble origin, his father being a butcher and grazier. Shakespeare himself was in early life a wool-comber.

Marlowe, the predecessor of Shakespeare, was the son of a Canterbury shoemaker.

Daniel DeFoe, the English novelist, and author of "Robinson Crusoe," was the son of a butcher.

Goldsmith entered Trinity College, Dublin, as sizar.

Robert Burns was a poor plow-boy in early life.

John Keats, the moving principle of whose poetry was the worship of beauty, was the son of a London hostler.

Thomas Carlyle was the son of a thrifty, hard-working stonemason.

Charles Dickens was the son of a clerk in the navy-pay office, and from his early struggles and privations he obtained the knowledge upon which he so largely drew in his descriptions of the poor and outcast.—Rev. Watson B. Duncan, in Epworth Era.

Beware of Misjudging

Perhaps it were better for most of us to complain less of being misunderstood and to take more care that we do not misunderstand other people. It ought to give us cause at times to remember that each one has a stock of cut-and-dry judgments on his neighbors, and that the chances are that most of them are erroneous.

What our neighbor really is we may never know, but we may be pretty certain that he is not what we have imagined, and that many things we have thought of him are quite beside the mark. What he does we have seen, but we have no idea what may have been his thoughts and intentions. The mere surface of his character may be exposed, but of the complexity within we have not the faintest idea.

People crammed with self-consciousness and self-conceit are often praised as humble, while shy and reserved people are judged to be proud. Some whose whole life is one subtle, studied selfishness get the name of self-sacrifice, and other silent, heroic souls are condemned for want of humanity.—Ian Maclaren.

Those Who Do the Most Work

The people in all lines of duty who do the most work are the calmest, most unhurried people in the community. Duties never wildly chase each other in their lives. One task never turns another out nor ever compels hurried, and therefore imperfect, doing. The calm spirit works methodically, doing one thing at a time and doing it well, and it therefore works swiftly, though never appearing to be in haste.—Rev. Dr. J. R. Miller.

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Pain or dull ache in the back is unmistakable evidence of kidney trouble. It is Nature's timely warning to show you that the track of health is not clear.

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Oct., 1901. F. THOMAS, 427 Best St., Buffalo, N. Y.

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The Conversion of Gordon

BY ROBERT TYLER

THE managing editor of "The Morning Earth" was out of sorts. Yet it was small wonder, considering the fact that its foremost rival had printed a solid two-column interview with a distinguished Russian diplomat on the ultimate partition of the Chinese Empire. An hour earlier he had heard the tersely expressed opinion of the proprietor on the "beat," and now he was venting his ill-humor on everybody that came within reach. Hart, the hotel reporter, who should have turned in the story—for the foreigner was registered at The Windsor—had been fired without opportunity for explanation. He had quarreled with the city editor, and told him that he should have better sense than to employ a man who didn't know the difference between a news item and an Easter hymn. The office-boy was threatened with instant dismissal if he did not make faster time between the sanctum and the local room. In fact, every one who crossed the trocha of the threshold came in for a share of the trouble.

For a while he sat in his chair growling to himself as he looked at the paper, and mentally figured where that interview would have been if that imbecile, Hart, hadn't fallen down on it. He stirred uneasily, and now and then looked toward the door, as though anxiously waiting for some one to come in whom he could make miserable with him. But no one came, and after reading the "scoop" of his contemporary twice he called the office-boy.

"James, tell Gordon to come here at once," he said.

And the irreverent youngster went, wondering where on earth Gordon came in for any part of the row, for he knew that the "old man" liked the reporter he was sent to bring, and he had never known him to say a word to Gordon other than praise and advice. He felt sorry if Gordon was going to have it out with the editor, but he was philosopher enough to know that it was none of his business, and so he contented himself with delivering the message.

Jack Gordon, or John Gordon, as he preferred to be called since the day he had graduated from old Yale, was a splendid fellow, with a most promising future. During the three years he had been on "The Earth" staff he had demonstrated that he was made of the stuff that makes good editors, and he had been rapidly advanced until he was the acknowledged star reporter of the staff and had the best assignments on the books. Still it had made no difference with him, and he was still the whole-souled Jack Gordon of old, except perhaps his views of life had been tinged with cynicism, that comes to every man who sees the world behind the scenes and knows men as they are and not what they seem to be. Morrell, the managing editor, was a young fellow himself—not yet thirty-five—who had won his spurs by just the kind of work that Gordon had been doing, and he liked to surround himself with young men who were bright and ambitious. Gordon's work pleased him, and Mr. Morrell had pushed him along as fast as he could without fear of spoiling him with too rapid advancement. They were excellent friends outside the office, and Gordon merely smiled when the office-boy warned him that there was a warm state of affairs in the "boss' room."

The smile faded rapidly, for when he entered he was greeted with a very frigid "good-morning" and told to sit down. For a couple of minutes the editor was silent, evidently thinking over what he intended to say.

"Look here, Gordon," he finally said, "what's the matter with this Grey case? You've been on the story now for two days and haven't turned in a line. There's a good story there, and I want you to get it. There's no doubt but that the man's guilty, and you ought to be able to dig up enough evidence to warrant our saying so. I heard to-day that he was raving in his delirium. Go up to the house and get in, say you are a new doctor, or make some other excuse, and listen to what he says; then write it up for three columns, and tell Haskell to make a two-column cut to go with it. If you don't turn in a good story to-night I'll put Marshall on the story and start you to chasing pictures for the Sunday edition. I'm beginning to think that's about your limit, after all. That's all."

Gordon got out of the office half mad and half amused, for he knew that when he should dine with Morrell at night there would be no trace of that biting sarcasm that hurt a moment ago. Yet he didn't like to be talked to in that way. But he concluded to look at it as a soldier would a reproof from his superior, and he let the matter drop. The story that the editor referred to had been given him two days ago, and it was perfectly true that he had written nothing about it. He had tried his best to get hold of something to permit him to turn in the story "The Earth" wanted, but it was seemingly impossible. Harrison Grey, the man in the case, had been the secretary of a now-defunct investment company. The president of the company had left for Europe, and the institution had been closed by the state authorities. There was a big embezzlement charge somewhere, and everything pointed to the missing president as the guilty party, but he was away, and Grey was confined at his home by a severe attack of brain fever. The house was guarded by officers, and the examiners were going over the books. No formal arrest had yet been made, but if anything appeared to implicate Grey a warrant would be sworn out.

What Gordon was trying to do was to get some tangible evidence that Grey was the culprit in advance of the action of the law. The downfall of the investment concern had resulted in hundreds of poor people losing their savings, and the public demanded that some one be punished. Grey was the only man to hold, and "The Earth" wanted the evidence to hold him. It is part of a newspaperman's creed to hold every accused criminal guilty of the charge against him until his innocence has been proven by twelve jurymen, and Gordon shared in this belief. He had worked on two similar cases in the past year, and in each instance had succeeded in running down the guilty man ahead of the detectives.

The Grey case, however, baffled him. The man belonged to but one club, and that was a small affair on the upper West Side, where he was rarely seen except on ladies' night, when he accompanied his wife and sister-in-law. He was a member of a small church, and while a devout man to all appearances he was not open-handed in his charity. He gave well within his means, and his piousness was not so pronounced as to be offensive. The family Gordon found out consisted of the wife, her sister and a little daughter of six years. His face was unknown in the all-night resorts that line both sides of Broadway from Fourteenth Street to Forty-second Street, yet he was not a total abstainer, but had never been known to drink to excess but once, and when Gordon ran that down he found that it was at an alumni banquet. In fact, he seemed to have lived a very commonplace sort of life, happy in the love of his wife and little one.

Gordon found men who didn't like him; but even with their bitterness they could find nothing in his private life to criticize. He lived modestly in a cozy flat on West One Hundred and Tenth Street, and in fact did nothing that would furnish the slightest ground for a story connecting him with the embezzlement. Gordon spent part of one day trying to find out if any large sums of money had been invested in his wife's name. All he discovered was that something like ten thousand dollars had been used in the purchase of some property in Mount Vernon, where they had their summer home; but Gordon found the man who closed the deal, and he was one of the executors of Mrs. Grey's father, and the money was invested for the little child, to be held by the mother until her daughter was of age.

Therefore Gordon was in a quandary. He had covered the story as thoroughly as he knew how, and had failed to discover anything of importance. The only remaining chance was the one suggested by the managing editor that he try to gain access to the sick-room and hear what Grey said in his delirium. It was well known that his illness was the result of the failure of the company, and it was of course possible that he would say something that would incriminate him whether he was guilty or not. Gordon had no intention of doing anything until after lunch, and so he swung onto a Broadway cable-car instead of taking the "L," intending to stop up town somewhere for a bite to eat and incidentally to plan what course of action to pursue.

He dropped off the car at Twenty-third Street, and started to stroll up to Thirty-fourth, where he knew of a little place that had the twin virtues of moderate prices and excellent cuisine. He forgot the story as he walked along, bumping and being bumped by the never-ending stream. He enjoyed this surging, restless Broadway crowd, as it reminded him so much of his own life since he had been a part of the great city. He was in that same hurry, and had jostled his way through the throngs with which he had come in contact, until he had reached an elevation where he could look down upon the others struggling for a foothold in the big town. As he turned into Thirty-fourth Street he noticed by a sidewalk clock that it still lacked a half hour of twelve, and he walked back to the Elevated, and took the up-town train.

He got off at One Hundred and Tenth Street, and decided to take a look at the Grey house before luncheon. He was not known there, as he had never presented himself, thinking such a mission would be hopeless and unproductive. As he passed the corner he saw Casey, from headquarters, who was detailed on the case. He had been to see the policeman who was watching the house, but there was nothing new, simply the doctors, nurses and servant going in and out.

"She's a hard 'un," remarked Casey, referring to the case. "I am afraid we won't get much out of it, Mr. Gordon, until they get through with the books."

"It looks that way, Casey," replied the reporter.

"Are ye goin' to try to get in the house? I don't think they will let you. They threw me down."

"Who did it?" asked Gordon.

"His wife's sister. My, but she's a corker. Pretty as a picture, but you can't bluff her," replied the officer.

"Well, so long, Casey. I think I'll take a look at the house, anyway; there's no harm in that."

"So long, and luck to you," sang Casey, as he disappeared into a convenient side door.

Gordon walked on, and as he looked at the house he could not help thinking of the tragedy that was being played there. What would be the end? If the man was proven guilty, or if the illness should be fatal, there would always be a stain on the family name. What would become of the little daughter when she grew to young womanhood and was told the story of her father's death or conviction?

"Bah, I'm getting sentimental. These people are nothing to me. I'm after evidence, and I'm going to have it if it's there."

As he walked by the house the door opened and a little tot, evidently the daughter, came out. Her baby-face was serious as she tiptoed out and slowly closed the door behind her, as though fearful of disturbing the invalid. Then she ran down the steps and scampered to the corner, around which she disappeared from sight. Gordon's first impulse was to follow her, and he obeyed it. As he turned into Ninth Avenue he saw her walking rather fast down the street, but it was only a moment before he overtook her. He had it in his mind to frighten her and force her to tell what she could, and then the manifest unfairness of such a procedure asserted itself, and his old nobler nature came out on top.

"It would be a shame," he muttered to himself, "to take such an advantage of the child," and he started to retrace his footsteps. But he had almost reached her, and as she turned and saw him she stopped, and looking up into his face said, with the innocent trustfulness of childhood, "Hello!"

Gordon loved children. He liked them for what they gave promise of developing into, and as he looked down into that baby-face he forgot his mission. There was something in the cherub features that reminded him of some sweet face he had known in the years of his young manhood. For the time he could not place it, nor recall the name of her whom the tot resembled, but for the sake of her older counterfeit his heart went out to the diminutive girlie, and he took off his hat with gravity and courtesy as he replied to the salutation, "Good-morning, miss; don't you think you should have an escort?"

She looked a bit puzzled. Evidently she did not catch his meaning, and seeing it he said, "Dear me, you didn't understand me, did you? Aren't you afraid to be out alone, little one?"

Her face brightened and the mischievous smile that broke out about her tiny mouth was in her eyes as well as she looked up. "Oh, mama would be awful angry if she knew it. But I don't care. It's so hard to be shut up all the time. Mama and Auntie have to take care of papa. He's sick, you know. And so, and so I just put on my things and ran away. But I'm going back, because mama says I'm all she's got, and she wouldn't lose me for anything."

"Of course you're going back; but we'll take a little walk first, and then we'll go back home. What do you say?"

"All right," she said; and then she slipped her little hand into his strong, large one, and he shortened his footsteps so as not to make her walk too fast.

Both were silent for a moment. Gordon was thinking that after all he ought to get the story. Providence had thrown the child across his path, and he had no right to cast aside the gifts of Fate. He was just wondering how he would commence when he felt a tug at his hand. He looked down and saw the little girl smiling up at him.

"My name's Margaret. What's yours?" she asked.

"Mine? Oh, mine's Jack," he replied.

She was silent again, and then said, "I like you. Do you like me?"

A diplomat could not have disarmed him more skilfully or thoroughly. The story could be hanged, and likewise the paper. Gordon picked the little one up in his arms, and there was moisture in his eyes as he kissed her and said, "God bless you, of course I do! I wish you were my little girl!"

"Nope," she replied, shaking her curly head. "I'm naughty lots of times, and mama says sometimes she thinks I don't belong to her, but to some gipsy mama. But she doesn't mean that, you know, does she? But I've been real good since papa has been so sick, and this is the first time I have runned away at all."

"Why, goodness gracious, Margaret, you're a little saint compared to some little girls that are really naughty. Now, you never do what mama tells you not to, I'm sure."

"Once I did. Mama said I mustn't take any sugar, and I did, and mama caught me. And she just talked to me so, and I cried, I did. I wish she had spanked me; but she didn't, she just talked to me, and it made me feel awful bad. Did you ever steal any sugar, Mr. Jack?"

"I'm afraid I did when I was your age. I guess all babies do that—"

"I ain't no baby. Why, I'm six. Mr. Jones, who lives in the flat above us, has got a baby, and it's just the littlest thing. I'm awful big side of her."

"Well, Margaret, you certainly are not a grown-up girl. But, by the way, I'm hungry, dear. Have you had lunch?"

"No; and I'm hungry, too."

"Well, come on and we'll get something to eat, and then I'll take you home."

As he ceased speaking he felt the little hand that rested so confidingly in his tighten its clasp, and she looked up at him and smiled. Gordon remembered whom she reminded him of now. It was in his college days that he had met Nell Raymond. He had been introduced to her at one of the class balls, and had been her faithful cavalier for the succeeding two years. Living in a college town he could not monopolize all of her time, but the year following his graduation he had spent the summer with her at Short Beach. He thought then that she loved him, but one afternoon Goodlove, a senior, had intimated that he was engaged to Nell, and without waiting for confirmation he packed up his luggage and cleared out. In the intervening years he had tried to forget her, but the memories that were awakened by the sight of the little girl's face told him that the love he had tried to smother still smoldered. Since he had been in New York he had little time to think of sentiment, working as he did almost slavishly, first for recognition, and then for advancement. Now the old days came back to him, and he remembered the delightful little outing trips he had planned and carried out for her pleasure. All this was most pleasant to him, and so he determined to let the story slip and devote himself to entertaining Miss Margaret Grey for the afternoon as best he could. He knew of a quiet little restaurant a little further up town, and hailing a cab he directed the driver to take them there.

When he came to order the dinner Gordon forgot for the moment his little guest. He was scanning the wine-list for a good claret, when he was recalled to his senses by Margaret doing her own ordering.

"I want some bread and milk, please."

"Bless your little heart, bread and milk it shall be!" he exclaimed. For himself he hardly knew what he ordered; but he took good care not to order anything from the wine-card, for he felt that the Greys were the sort of people to rear their little one to abhor wines and liquors, and he did not want to do anything to mar the good opinion she already had of him. The child could not keep quiet. It was a lark for her, and she babbled innocently on one topic and another all the time, Gordon answering her in a manner that put her still more at ease. Finally her prattle veered around to the situation at her own home.

"Papa he's very, very sick, you know. And every night I pray to God to make him well, and to make me a good girl. Say, Mr. Jack, do you think I'm an awful bad girl?"

"No, indeed, Margaret; I think you're a good little maid. By the way, what's the matter with papa?" Gordon asked, the reportorial instinct coming to the surface unconsciously, though he had no idea of using any information she might let slip for a story.

"Papa's head is all mixed up. He says such funny things about a bad, bad man who runned away, and the bad man did something wrong, and papa says he's sorry for mama and me. He don't know mama and Auntie sometimes, and, what do you think, the other night he didn't know me. He spoke awful cross, and papa never does that when he ain't sick, and goes down town every morning to stay all day. He used to kiss me good-by, and call me his little angel, and I used to watch for him to come home, and run downstairs and open the door when he didn't know it and scare him."

Gordon smiled as he thought that if he was after the story it was coming altogether the wrong way. He began to feel that, after all, the man was innocent and he had been unjust in thinking him guilty. He was thinking of the self-evident happiness of the little miss when he heard a familiar voice from behind.

"Hello, Gordon; I've been looking for you."

He turned and saw Mr. Morrell, the managing editor. He was still wondering what brought him to Harlem when the editor said, "I thought I would take a run up and see if I could find you here. I had to come up this way, anyhow, and I heard after you left that Gr—"

Gordon held up his hand and enjoined

silence. Then he said, "Permit me, Miss Grey, to present Mr. Morrell; Mr. Morrell, Miss Margaret Grey."

"The daughter!" muttered Morrell, as he smothered an exclamation of surprise; and then he looked at the reporter in wonderment and admiration. He leaned close to Gordon's ear and whispered, "Well, you're a corker. I'm going, old fellow, but you're dead sure to have the story now. I tell you, my boy, I'm proud of you. I couldn't have done it better myself."

"Probably not," thought Gordon, as he saw him pass out the door. "But if you would print a story that a confiding little child would tell when her elders would not speak a word you're a damned brute, Morrell, that's what you are."

"I don't like that man," said Margaret, when Morrell was out of ear-shot.

"I'm afraid I don't, either," replied Gordon. "I used to once, but I don't like him at all to-day, Margaret. But never mind, he won't come back."

"Mr. Jack, here's mama and Auntie," said the little one, as she took a chain from around her neck, at the end of which was an old gold locket. She handed it to him, and as he took it in his big hand she slipped from her seat, and running around the table climbed up on his knee. "See, this is mama, and this one here is Auntie. Don't you think mama looks like me?" she asked.

Jack Gordon sat bolt upright. The Auntie was unmistakably the Nell Raymond of his college days. He thought he remembered the picture, too. It was a duplicate of one he had carried in the back of his watchcase, but which he had returned when he left the Beach so suddenly. No wonder the little one reminded him of Nell. He recalled that she had spoken of a married sister, who was then living in New York City, but he had never met her, and the name, if he had heard it, slipped his memory.

"What's Auntie's name, Margaret?" he asked, so softly that she hardly heard him.

"Oh, Auntie's name is Nell; Auntie Nell. Why, Mr. Jack, what's the matter? Your eyes are all wet."

"Never mind, Margaret; I was thinking of a little girl I used to know that looks like Auntie. And is Auntie Nell married?"

"No: she ain't going to get married." She was silent a moment in thought; then, looking up into his face, she slipped a chubby arm as far around his neck as it would go, and nestling close to him, whispered, "Mr. Jack, if you'd marry Auntie you'd be my Uncle Jack, wouldn't you?"

"Yes, dearie, if I married Auntie Nell I would."

Gordon didn't want to prolong the conversation; he wanted to think, so they started back in the cab. Goodlove had lied to him; or at least if he had been engaged to Nell Raymond, the engagement had been broken. He didn't believe now she had ever loved Goodlove. And the man he was trying to land in jail was Nell's sister's husband. In the moment his course was changed. He wanted the story worse than ever, but his purpose now was not to prove the man's guilt. He would make this the exception to the rule, and he felt that he had sufficient influence with Mr. Morrell to force him to see the justice in the situation and espouse the sick man's cause. But he wanted to get into the house. His only fear was that Nell would recognize him, and once she did he knew his mask would be torn off, for he had signed many articles he had written, and if she had been in New York for any length of time she must have seen his name and knew his occupation. Still it was worth the risk, and he was going to take it.

Little Margaret was curled up in the cab, and was looking very serious and rather sleepy. Gordon looked down at her and smiled, and she returned his smile, and as though Fate directed her lips to say that which Gordon most wished to hear, she asked, "Mr. Jack, I want you to come in and see mama. Auntie's down town, but if you wait you can see her, too. Will you, please?"

"Why, yes, Margaret; I should like to meet your mama," he replied. If Nell was absent he would risk detection at the hands of Mrs. Grey and see what he could discover.

As they drove up to the house Gordon felt his heart thumping as though he were approaching a great danger of some kind; but he was determined to get the story now at all hazards, and he lifted Margaret out and carried her to the stoop. She pointed out the bell he should ring, and a moment later the door opened and they entered. Up two flights of stairs she led him, and in the hall an anxious, care-worn woman gathered the little one in her arms, and kissed her, as half crying, half laughing, she said, "Oh, Margie, where did you go? You have worried poor mama so much. She thought she had lost her precious treasure. My little girlie mustn't do it again."

Gordon had not been noticed by the mother, until the tiny maid struggled from her arms, and said, "Mr. Jack, this is mama."

"It's all right, Mrs. Grey. I met her outside a moment ago, and took the liberty of entertaining her at lunch without a chaperone," said Gordon, and he forced a little laugh.

"It was very kind of you, and I thank you. We missed her, and couldn't imagine where she had gone, and it's so easy for children to get lost in this big town. Won't you step in for a moment?"

Gordon accepted the invitation to enter, and found himself in a very cozy little room. There was nothing ostentatious about the furnishings, and if Grey had embezzled any money it certainly had not been spent here. From an inner room he heard a plaintive, peevish voice call, "Bessie, Bessie, come here a moment, please."

The mother excused herself, and a moment later Gordon heard Harrison Grey's delirium:

"Bessie, old Van Cott's gone. The company's broke. He told me so, and I've got to stand the brunt. He isn't coming back. It's so hard, Bessie; it's so hard." Then he fancied he was going over a scene he had evidently had with the absconding president before his departure. "I tell you, Mr. Van Cott, I won't stand it. It isn't right. The money belongs to poor people, and if you leave now there's no chance of making it up. It's gone? Well, damn you, you ought to be shot. What am I going to do? You don't care? If I had my hands on your throat I'd choke out every bit of breath in your miserable body. I'll go and inform the police. Gone! Good God, Bessie, Margaret, they'll say I did it. What shall I do? What can I do?"

Gordon was so intent on listening to the ravings of the sick man that he did not hear another person enter the room. He was thinking of the man's sufferings when he was suddenly aroused by hearing his own name. "Jack Gordon, you here?" and there was infinite contempt in the four words.

Gordon jumped to his feet, then recoiled a step. "Nell Raymond! So you are Auntie?"

"Yes, Mr. Jack," interrupted Margaret, "that's Auntie."

For a moment neither spoke. Gordon saw before him the girl he loved, unchanged except that the passing years had marked more plainly in her face the lines that indicated her splendid character.

"Of all persons, Jack Gordon! I suppose you are here to accuse Mr. Grey of embezzlement. I know of your work, and I'm surprised you haven't been here before. But there was no need of you using this child as a decoy. Had you sent up your card you would have been admitted."

"But you refused to admit Casey," answered Gordon, fencing for time to collect his thoughts.

"There has been no legal action taken. I asked if he had a warrant. He said he hadn't, so I shut the door in his face. But I wished you to come, so that you might know the charges are not true."

"It's very kind of you, Miss Raymond, to favor a reporter for "The Earth" above others, and, believe me, I appreciate it."

"Never mind that. I suppose you are going to write it up as you do all your articles, and whether he's guilty or not be will be dragged in the gutter of shame in order to satiate the appetites of your readers? This is not the Jack Gordon I used to know, and—"

"And what? Be careful what you say. You know you threw me over for Goodlove, of 'Sheff,' once."

"For whom? I throw any one over for that contemptible cad? I would rather have a dead man for a lover than that fellow. For shame, Jack! But that's neither here nor there. You are here as a reporter. Do you want what facts we have, or do you prefer to have less facts, so that you can make it the stronger against him?"

"Not now. When I left the office this morning I intended to gain entrance here by some means and write a story that I confess would not please Grey or his friends. I didn't know anything about him, and I was selfish enough not to care, but this little girl (and he patted Margaret's curls), with her innocent faith in her father, and the friendship between us of an hour's standing, has converted me."

"Do you mean it, Jack, or is it a ruse to try to throw us off our guard?"

"I'll tell you this, Nell, if any story goes in 'The Earth' about Grey it will be to prove his innocence."

Then they sat down and went over the whole story. The past history of Van Cott was known to Miss Raymond, and he was a thorough scoundrel. Every cent Grey had in the world was tied up in the company, and at that moment he would have been penniless but for some money his wife had in her own right. In handling some papers Jack accidently took Miss Raymond's hand. As he did so he felt an electrical shock go through him, and it was the more pleasant because the hand was passive.

Gordon was on the verge of telling her of the old love that had never died, but he refrained, and kissing the little one good-by he left the house. When he reached the office he went straight to Mr. Morrell's room. That worthy was in excellent humor, for he had beaten his hated contemporary by getting out an extra edition fifteen minutes ahead of them announcing an important event, so when Gordon said he had the story the editor replied, good-naturedly, "Good enough, my boy. Is it all right?"

"It's a good story, but Grey's innocent."

"What! Pshaw, let it drop, then," was his rejoinder.

"No," said Grey; "I want to print it, Mr. Morrell. It's a good story, and it's only justice to the man. Will you run it?"

"All right, Gordon. Keep it in a column."

And that was how the next morning the world heard of Grey's innocence and the president's scoundrelism; and a few days later a cablegram was printed exclusively in "The Earth" announcing Van Cott's capture in England, and of his confession exonerating Grey from any criminality.

In the weeks that followed during Grey's convalescence Gordon was often at the house. Ostensibly it was to visit Miss Grey, but somehow it happened that Mrs. Grey always called Margaret out of the room after Jack had been there a half hour or so. One day when they were recalling the old New Haven days Jack said, "And Goodlove, Nell, did you never care for him?"

"No, Jack, never. If he told you anything, it was untrue."

"And you did care for me, Nell?"

She was not emotional, but a happy look came into her eyes, tired by long waiting, and she leaned toward him, and softly replied, "Yes, Jack."

A moment later little Margaret peeped in, and then discreetly withdrew. But when Jack took his leave she made bold to pluck at his coat, and motioned that she wanted to whisper something to him. He bent down, and she asked, "Are you going to be my Uncle Jack?"

"I guess I will, Margaret. Do you want me to be?"

"Yes," she replied; and Jack took her up in his arms and kissed her.

Napoleon's Possum

BY PAULINE SHACKLEFORD COLYAR

"TO-MORRER'S Chris'mus," remarked Uncle Poke, as he jogged along from the landing, "an' it mek fo' ye'r sence dat boy, Jeems, runned off. Well, suh, time suttinly do trahble!"

The collar of his dilapidated old overcoat was turned up so high that it rested in affectionate proximity to his coonskin cap—this latter being almost as bald in spots as the head it covered.

A cold north wind was blowing, bringing with it the first hint of winter. Roses were still in bloom, but they looked chilled and desolate, and the chrysanthemums that peeped through the palings of a yard along the roadside were swaying and shivering in the frosty air. As Uncle Poke looked at them his thoughts flew back to the time when flowers grew in his own little yard—when his wife was living, and he and "leetle Jeems" made merry together on Christmas morning.

"I membahs it same ez ef 'twuz yistiddy," he declared, dropping the reins and rubbing his horny hands, "de day de ole 'oman nomernate ter me she mus' name de baby Jeems, hein' ez I got de Poke part fur myse'f, an' 'Jeems K. Poke' mought soun' too onruly fur sich er little teensy scrap ez him."

The old man dropped his chin upon his breast, and looked up smiling over his bushy eyebrows. "But he sho'ly did grow wuss dan er gode-vine when he tuck er start," he continued. "Strut right maunish when he ain't but two ye'r ole."

Again he rode on in silence; but suddenly he straightened himself, gave Billy a lash, and asked, as though appealing to some invisible listener, "But would you er think o' dis heah feller runnin' away on recount o' me beatin' him fur eatin' up dat Chris'mus possum all by hisse'f? Jeems allus sot monst'ous sto' by er possum," he explained, apologetically.

Only a worm-fence and Uncle Poke's truck-patch separated his own cabin from that of Daddy Dave; but Uncle Poke did not encourage intimacy, and kept aloof from all neighbors. Both places faced the Mississippi River, which swept majestically past them some hundred yards away, and Daddy Dave and his three boys ("er onery, no-'count lot," Uncle Poke styled them) eked out a livelihood catching and selling fish.

Uncle Poke was accredited with "knowin' kunjer," and the colored population in his vicinity stood much in awe of him. Scarcely a month passed by that some unfortunate who had discovered himself "tricked" did not have recourse to the old man for counter charms.

"He got dry scworpions hangin' 'longside o' his chimbly," Daddy Dave vouchsafed.

"An' folks does tell ez how his yaller dawg's er witch, too," responded Sis' Tempy, his wife; while the two elder boys shook their heads ominously, and asserted their intention not "ter monkey 'long wid no sich."

Not so, however, with Poliam—otherwise Napoleon Bonaparte—the youngest of Daddy Dave's sons. He was small and black, with very white teeth, big, prominent eyes and a marvelous facility for being out of sight when wanted. He raided Uncle Poke's henhouse whenever opportunity offered, and he and the old man waged a perpetual warfare of words across the dividing fence. But as Poliam was the quicker-witted and more nimble-tongued of the two he was never worsted in the encounters.

As Uncle Poke reached home to-day he noted Poliam's face peering at him above the top rail of the fence, ready to open the attack.

"I'se powahful glad you done kiver up ole Billy wid dat sack," he called out lustily, "kaze I seed er passel o' buzzards dis mawnin' down in de pahstur' playin' poker fur his kyarcass!" With a burst of laughter he sprang lightly to the ground and disappeared around a corner of the cabin.

Uncle Poke shook his fist menacingly and opened his mouth in an abortive effort to speak; but words failed him even while he was giving Billy his accustomed measure of hay and corn, with an extra ear or two, "kaze it's Chris'mus times." For a long while afterward he sat dejectedly eyeing the pot of rabbit-stew that swung from the crane in his chimney, for he had been wounded in a very vulnerable spot. Billy was not only his friend, tried and true, but he represented all that was left to him of his small family. Billy had drawn the wagon which brought himself and wife to their new home here by the river, and it was upon Billy's patient back that "leetle Jeems" had learned to ride.

"An' dat black scound'el 'lowed ez how de buzzards wuz playin' cyards fur his po' ole frame!" he muttered, fiercely.

Now and again he knocked the ashes out of his stumpy cob-pipe, refilled it with tobacco-crumbs from his pocket, and lighted it with a coal of fire tossed gingerly from his open palm into its bowl.

Two hours or more passed thus, when, with an emphatic gesture, he sprang to his feet, exclaiming, "Yas, suh, I'se gwine ter do it ef it's de las' ack!"

He donned his coonskin cap, and repeated, slowly, as he disappeared through the front door, "Right dis heah minute, suh, ef it's de las' ack!"

He did not pause until he stood within the little inclosure before Daddy Dave's cabin. "You, Poliam!" he here cried, raising his voice in the stillness. "You, Poliam Bonypart! I dar' you ter show so much ez de p'int o' yo' nose outen dat do'! I done stan' yo' sass jes ez long ez Ise gwine ter, an' I come heah ter l'arn you how ter mek game o' er' 'specktable hoss lak Billy. You's er uice-lookin' sumpun ter be talkin' 'bout bones, nohow, bein' ez yo' oon entitle ain't nuffin but Bonypart—you black rapscallion you!"

Uncle Poke had not contemplated this pun when he began his harangue, and valued it the more because it came extempore. The windows were dark, and a death-like silence pervaded the little house. He listened intently, and soon convinced himself that Daddy Dave and family were away—"gone ter de landin' ter buy Chris'mus, mebbe"—so proceeded to relieve his overwrought feelings by discharging a veritable fusillade of invectives at Poliam and his ilk. Dark clouds were scudding across the sky, but as the old man turned to go the moon came out for an instant and revealed to his astonished gaze an opossum perched on the end of a pole that was stuck in a chink between the logs of the cabin.

"Hi!" shouted Uncle Poke, chuckling, "so you's Poliam's possum what he he'n braggin' 'bout, is you? Dis heah's sho' good luck, comin' 'crost you so lonesome-lookin', kaze I be'n needin' de likes ob you some days. Nebber mine 'bout squirmin', you cayn't git loose wid yo' tail kotch 'twix' de split en' o' dis heah saplin'."

All this while the old fellow was making his way toward his own door with the pole upon his shoulder. His tallow dip was still blinking and sputtering in the bottle, which did duty as a candlestick, when his neighbors returned, but none of them surmised the cause of his being up so late.

His conscience pricked him somewhat when he remembered how he was visiting Poliam's sins upon the unoffending heads of the rest of the family, but he salved it over with the comforting reflection that "wile varmints what roams de woods don't b'long ter nobody in pertickular."

"Dat's de trufe," he reiterated the next day, as though trying further to patch up the weak points in his argument; "dey's all wile varmints what roams de woods, an' don't b'long ter nobody in pertickular. Dat's what mek I say lak I does say. Ef dis heah same possum hatter he'n er tu'key or er goose"—enumerating the fowls upon his fingers—"or eben down twell er ole 'scovy drake, I dassent tetch er fedder."

The old man continued to baste the opossum for a moment, then replaced the lid on the oven and heaped fresh coals upon it.

"Now, on de 'casion o' dis heah bein' Chris'mus," he announced, "what don't git 'roun' but wunst ev'y ye'r, an' considerin' de fack ob what er outdacious rogue Poliam is, it do sorter jesterfy my cornshuns dat dis same possum is fat an' juicy. Jeemses ribber! but ain't dem sweet-taters got er gleesome smell ter er hongry man."

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He passed his sleeve across his lips to remove the moisture gathering there, and smacked his mouth as though he already tasted the savory dish. He bustled about the room, putting things to rights, but all his thoughts seemed to focus upon the oven, where the plump little opossum lay baking and browning hedged about with sweet-potatoes.

It was beginning to grow dark, and Uncle Poke had eaten nothing since breakfast, for he wanted to whet his appetite to its utmost limit. Opossum was a luxury he seldom indulged in now that rheumatism and old age had set their seal upon him, and it was not to be partaken of with undue haste.

"'Tain't gwine ter tek me long ter 'vestigate dis heah feas', kommo jus' ez it is," he argued, smiling, "an' de longer I puts it orf, de longer me an' dis possum kin keep comp'ny togedder."

Pompey, Uncle Poke's dog, wagged his tail with much energy, as though acquiescing in the assertion, while he looked from his master to the oven, and back again, swallowing hard.

The fact that all day Poliam had been seaching high and low for his "possum" had added no little to Uncle Poke's enjoyment, and he laughed now as he thought of it.

"Daddy Dave an' Sis' Tempy an' all of 'em wuz nosin' 'roun' permisc'us fur Poliam's possum," he remarked, giving vent to a prolonged guffaw.

When the potatoes and opossum were both a rich brown the old man placed the oven, with its lid off, to one side of the broad hearth, and gave himself just half an hour to wait before eating his Christmas dinner.

For full five minutes he sat with his eyes on the clock; but the strain was too much for him, his head fell back against the chimney, and he began to snore.

A knock at the door a moment afterward failed to arouse him, and he slept peacefully while a man lifted the latch and entered.

Pompey knew him at once, and gave way to extravagant demonstrations of joy.

"Land o' Goshen!" exclaimed the newcomer, patting the dog's head, "is dis heah you, Pomp? I made sho' you wuz dead an' gone. Well, 'tain't no use ter try ter wake daddy up. Er harrycane couldn't do dat twell he done finish his nap."

"Leetle Jeems"—little no longer—stood for a while irresolutely, his eyes wandering from one to another of the old familiar objects. Nothing was changed—his saddle still hung from the peg where he had left it four years before; his mother's spinning-wheel, much careened to one side, dusty and unused, sat in its accustomed corner, and the same faces looked down upon him, as they had done in his childhood, from the newspapers pasted on the walls. Turning toward the oven on the hearth he sniffed the air delightedly.

"Possum an' taters ez sho' ez my name's Jeems!" he exclaimed, with beaming face.

Without more ado he went down on his knees beside the oven, tearing off brown, juicy bits of the meat and sandwiching them between pieces of sugary potato, as he stowed them away in his capacious mouth.

"Um-uh!" he whispered, "dis is fittin' fur er king! I wishes my naick wuz long ez de Miss'ippi Riber, an twicet ez crooked, an' I could ta'se de possum all de way down! Ef he wuz ter wake hisse'f up an' ketch me lak I is he'd jump on me 'dout eben waitin' ter say howdy," he continued, glancing at his father between bites.

The old man stirred uneasily in his sleep, and Jeems stopped chewing to await developments, but soon the snoring began anew.

"S'posin' I mek 'tend lak he done eat it hisse'f," said the son, rising to his feet as a happy thought struck him.

Suiting the action to the words he thrust a bone between Uncle Poke's finger and thumb, moistened his lips and whiskers with gravy, then quickly left the room.

A short time afterward the old man opened his eyes, and they rested (all unconscious that his prodigal son was watching him through a knot-hole in the door) upon the wreck of his Christmas dinner.

"Is dis heah me er not me?" he asked, looking at the bone in a dazed fashion, while he tasted the gravy on his lips. "Ef I ain't et dis possum, how—how come dis heah bone in my hau' an' dis heah tas'e in my mouf? But yit ag'in, ef I is et it, it suttinly is de loncsomes' possum whut eber I mek 'quaintance wid!"

So bewildered was he that he did not hear the door open, and looked up indifferently as Jeems entered.

"Whut ail you, daddy?" he queried, innocently. "You looks right 'stracted."

"Is you stole my possum, hoy?" demanded Uncle Poke, threateningly, forgetting for the moment his son's long absence, his own loneliness—everything save the present misery.

"Steal yo' possum? Whut possum?" he asked, in well-feigned astonishment. "Ain't you see me jes dis minute git heah?"

After the first shock of his disappointment was over Uncle Poke found time to welcome Jeems more fittingly and to question him as to his checkered career during his long absence, but his thoughts still persistently reverted to the mysterious disappearance of the opossum.

Jeems threw a fresh log of wood on the fire, and dropping upon a convenient chair sat there watching the leaping blaze.

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"Is you hongry, boy?" asked his daddy, shuffling toward the cupboard in the corner and bringing to light sundry pieces of cold corn-dodger and bacon.

"I seen Poliam jes now whilst I wuz comin' 'long," announced Jeems, pretending not to have heard, "an' he 'low ez how some pussou done stole his Chris'mus possum. Whar you git yo'n f'um, daddy?"

The sequence of the two questions was most suggestive, and the old man winced slightly, but still preserved a bold front. "Whar you reckin?" he asked, gruffly.

Jeems did not think it prudent to reply, and was once more gazing into the fire, when he felt a touch upon his shoulder.

"Jeems, honey," inquired Uncle Poke, in wheedling tones, "does you 'membah ef dat possum o' mine whut you stole sot light on yo' stumick?"

"Light ez er fedder," answered Jeems, coughing behind his hand so as to disguise a laugh.

A long silence ensued.

"I does wish ter grashus Poliam hatter et his ole possum his ownse'f, don't yon, daddy?" queried Jeems, weakly, beginning to feel the ill effects of his overabundant meal.

"Who, me?" demanded the old man, scratching his woolly head in bewilderment. "Well, chile, ef it hatter sarved him de same trick ez whut it done me I p'int'ly spresserfy dat I does!"

A Modern Ark

The newest of queer religious sects is the Association of Christian Brethren, which is sailing down the Mississippi in a modern imitation of the Ark to tell people that the millennium is surely coming in 1941. "Megiddo" is the name of the boat, and nearly one hundred persons—men, women and children—live on her. Megiddo, according to the brethren, means "The Lord is in this place with an army."

The president of the sect is L. T. Nichols, who is also its founder. He taught his doctrines for several years at Minneapolis, and gathered around him a congregation, of which those on board the Megiddo represent less than one half.

With the aid of his parishioners Nichols built the boat at Lyons, Iowa, and she was launched two weeks ago. The doctrine of the organization is that the world is to undergo a complete transformation forty years from now.

Men's bodies are to be so changed that they can travel through space. Every planet will then be visited, and for that reason, next to the Bible, the brethren study astronomy. Exactly how the human body is to solve the problem of the flying-machine the brethren do not specify.

Among their other predictions, more or less picturesque, is one to the effect that the mountains of the earth will be leveled and the valleys raised, until the world is one vast plain, in fulfilment of the prophecies of Scripture.

There are fifty state-rooms on the boat for the members of the society, nearly all of whom are married, and two elaborately furnished apartments for Mr. Nichols and his wife. A large room in the middle of the main deck is used for meetings.

At eleven in the morning, half-past one in the afternoon and again in the evening all on board except the captain and engineer assemble for prayer, Scripture reading and the singing of gospel hymns. The music is led by a full brass band, an organ and two pianos. Then Mr. Nichols delivers a sermon, urging his followers to greater piety.

The entire boat is heated by steam from the boiler in the engine-room, and all the lights are made from a kind of water-gas invented by Mr. Nichols. Everything on the boat has a ritual significance to the brethren—the purple, red and blue braid on the uniforms which all wear, the red crescents and stars on their breasts, the pulpit, the scriptural mottoes and the walls.

For the present each family provides its own meals, because the dining-room and kitchen are not completed; but as soon as possible the entire community will eat at a common table.

There are twelve children on board, all over six years old, who do not speak above a whisper in the presence of their elders unless addressed by them. They wear the uniform of the sect, and the little girls wear their hair cropped short exactly like the boys. They are taught regularly by some of the women.

The reason the brethren have chosen a boat for their work of preparing the world for the spectacular millennium which they predict is that they believe they can lead holier lives themselves by being shut off in a large measure from the evil influences of the world. The society owns a big tent, seventy-five by one hundred and fifty feet, however, in which they will hold meetings at every point they touch.

President Nichols holds himself mainly responsible for the support of his followers, though they add somewhat to the revenue of the community by the manufacture of lamps and small wares. The members of the society expect to live on the Megiddo until the day of the millennium.

The captain and the engineer of the boat are the only members aboard of her who do not belong to the sect.—New York Sun.

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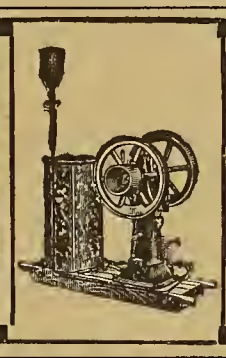

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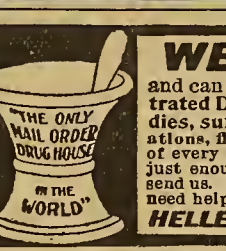

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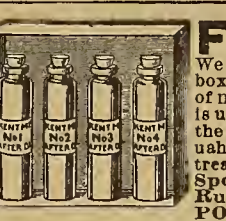

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At times he was so helpless that he had to take morphine, and after considerable doctoring he gave up in despair. He began studying into the causes of rheumatism, and after much experimenting he finally hit upon a combination of drugs which completely cured him. The result was so beneficial to his entire system that he called his new-found remedy "Gloria Tonic." Those of his friends, relatives and neighbors suffering from rheumatism were next cured, and Mr. Smith concluded to offer his remedy to the world. But he found the task a difficult one, as nearly everybody had tried a hundred or more remedies, and they couldn't be made to believe that there was such a thing as a cure for rheumatism. But an old gentleman from Seguin, Texas, wrote him, saying if Mr. Smith would send him a sample he would try it, but as he had suffered forty-one years, and wasted a fortune with doctors and advertised remedies, he wouldn't buy anything more until he knew it was worth something. The sample was sent, he purchased more, and the result was astonishing. He was completely cured. This gave Mr. Smith a new idea, and ever since that time he has been sending out free sample boxes to all who apply. In Prosser, Neb., it cured a lady of 67 who had suffered fifty-two years. In Fountain City, Wis., it cured Hon. Jacob Sexauer, a gentleman of 70, who suffered for thirty-three years. In Perrysburg, Ohio, it cured a gentleman 70 years old. In Heron Lake, Minn., it cured Mrs. John Gehr, who had suffered for thirty years. Rev. C. Sund, of Harrisville, Wis., tested this remarkable cure on two members of his congregation, one who had suffered fifteen and the other twenty-five years, both were completely cured. In St. Louis, Mo., it cured Mr. F. Faerber, of The Concordia Publishing-House. In Vandalia, Ill., it cured Mrs. Mary E. Sayles, 78 years of age, who was so crippled that she could not dress herself. In Bennington, Vt., it cured an old man whom the best physicians of Worms and Frankfurt, Germany, called incurable. This old gentleman had walked for twenty years on crutches, both legs having been lame. He can now walk like a young man. Even prominent physicians had to admit that "Gloria Tonic" is a positive success, among them Dr. Quintero, of the University of Venezuela, to whom it was recommended by the United States Consul. In thousands of other instances the result has been the same. It cured many cases which defied Hospitals, Drugs, Electricity and Medical Skill, among them persons over 75 years old.

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How the Marriage Fee Was Raised

A POOR couple living in the Emerald Isle went to the priest for marriage, and were met with a demand for the marriage fee. It was not forthcoming. Both the consenting parties were rich in love and in their prospects, but destitute of financial resources. The father was obdurate. "No money, no marriage," he said.

"Give me lave, your riverence," said the blushing bride, "to go get the money."

It was given, and she sped forth on the delicate mission of raising a marriage fee out of pure nothing. After a short interval she returned with the sum of money, and the ceremony was completed to the satisfaction of all. When the parting was taking place the newly made wife seemed a little uneasy.

"Anything on your mind, Catherine?" said the father.

"Well, your riverence, I would like to know if this marriage could not be spoiled now?"

"Certainly not, Catherine. No man can put you asunder."

"Could you not do it yerself, father? Could you not spoil the marriage?"

"No, no, Catherine. You are past me now. I have nothing more to do with your marriage."

"That aises me mind," said Catherine, "and God bless your riverence! There's the ticket for your hat. I picked it up in the lobby and pawned it."—The Epworth Herald.

A Ground-hog Case

An old mammy, who had known Governor Taylor of Tennessee from his childhood, came into his office, and began at once to plead for the pardon of her husband, who was then in prison.

"Laws bress yo' life, Marse Bob," she began, "I wisht you'd pahdon dat po' ole niggah Jim. He ain't no good for nuffin' nowhar. He jest dat useless an' triflin', even at home, dat he cahn do no mo' den sorter scrape aroun' an' git a little soupen for we-all to eat, an' he sholy ain' no good down dar in dat pen."

"I can't do it, aunty," the Governor said. "I am being abused every day. What's Jim in there for?" he asked, seeing the light that was left dying out of the old woman's eyes.

"W'y, Marse Bob, dey jes' put him in dar for nuffin' 'pon earth 'eept takin' one po' little ham outen Mr. Smith's smoke-house. We was outen meat, an' de o'e niggah didn't do nuffin' 'cep tek de ham fur ter keep we-all fum starvin'."

"Well, now suppose I should pardon Jim, what good would that do you? He is so ouery and trifling," the Governor was saying, when the old woman broke in with the reply:

"W'y, bress you, Marse Bob, we is outen meat agin, an' we jes' got to have anothah ham!"—Louisville Times.

The Wife's Share

"My dear," whispered the young man, "as we are so soon to be married we should take a practical view of life and profit by the mistakes of others. For instance, there is the subject of a regular allowance every week for spending-money, you know."

"Oh, I've thought of that," she replied, sweetly.

"Have you?"

"Yes, indeed; hundreds and hundreds of times, and lately I haven't thought of much else."

"Eh?"

"Yes. Your income is four thousand dollars, isn't it?"

"Yes; and I want it to go as far as possible toward your happiness."

"Of course. Well, I've talked it over with mama, and she thinks an allowance of five dollars a week will be plenty."

"Indeed!"

"Oh, yes. You can walk to the office, you know, and carry your lunch, you know, and so you can use the whole five for cigars and neckties and things."—Pittsburg Bulletin.

Georgia Nuggets

Ef you wants ter make a man feel satisfied wid dis worl' des tell 'im dat his time's up, en he gwine ter de next.

Furrin missions is all right, but hit makes folks feel funny ter see a heathen in a beaver hat en a fur overcoat whilst we gwine roun' in a hickory-stripe shirt!

Some folks wants all de gold what you kin dig fer 'em: but when it come ter diggin' it deyse'f dey gits a certificate fum de doctor sayin' dat what dey needs is res'.—Atlanta Constitution.

Eggs Down

"Madam," said the facetious boarder to the landlady, "are these storage eggs?"

"I think they must be," replied the lady; "you appear to have stored away five of them."—Cleveland Plain Dealer.

She Trusted Him

As the daily train reached a Vermont village the other day an antique-looking dame thrust her head out of the window opposite the refreshment-room, and briefly shouted, "Sonny!"

A bright-looking boy came up to the window.

"Little boy," she said, "have you a mother?"

"Yes, ma'am."

"Do you go to school?"

"Yes, ma'am."

"And are you faithful to your studies?"

"Yes, ma'am."

"Do you say your prayers every night?"

"Yes, ma'am."

"Can I trust you to do an errand for me?"

"Yes, ma'am."

"I think I can, too," said the lady, looking steadily down on the manly face. "Here is five cents to get me an apple. Remember, God sees you."—Boston Courier.

As the Pupils Understood It

"A teacher," says the Boston "Transcript," "had been reading to her young pupils an account of a 'man who had lived some years upon the frontier.' When the story was reproduced by a child, to her surprise it read that he had lived for some years 'on his front ear!'

"Another teacher read that a gentleman 'had occupied for some time a fine country-seat.' Upon asking the children what was meant by a 'country-seat' a dead silence reigned, until one little fellow said he thought he knew, and to the inquiry of the teacher replied, 'A milking-stool!'

"Still another teacher had been reading to her pupils about the rain. Asking one of them to write a little story about the rain he, after declaring his inability to do so, upon the teacher's insistence produced the following: 'What does the rain say to the dust? "I am on to you, and your name is mud!" ' "

When a Man Can Fly

"Dey say dat a man can't fly," said the colored citizen, "but dat's all a mistake; you des scare 'im had enough en he'll surprise you! W'en I use ter live in Alabama endurin' de days er de Ku-klux, me en n'er feller wuz a-settin' 'pon top a hill, sayin' what we'd do ef de Ku-klux tackle us, w'en lo en behol'! heah dey come, twenty strong, ridin' straight fer us! Well, suh! we light out time we see 'um, en I didn't tech de groun' fer two hours by de clock. I flewed, I did, en I could heah my wings beatin' de air ez loud ez a bass-drum; en w'en we done got cl'ar out er range I had ter turn sideways ter light! Can't fly, eh? Des let de Ku-klux come a nigger's way en he'll give you a lesson in flyin' dat'll las' you all yo' life, en be de wonder er yo' grau'chillun!"—Atlanta Constitution.

Sweet Charity

The caller explained his mission.

"It's a worthy cause," he said.

"It is, indeed," admitted the up-to-date merchant. "You may put our firm down for five hundred dollars."

"Good!" exclaimed the caller. "It's to be done very quietly and unostentatiously, of course. The money will be given in a lump sum from 'a few friends,' without any names whatever."

"No one will know who gives?" asked the merchant.

"No one," answered the caller.

"No list published?"

"None."

"Cross off the name of our firm."—Chicago Post.

Too Easy

Theodore—"It's all right, darling, I have met your father, and we took to one another at once. He even went so far as to borrow ten dollars of me. Surely he can't refuse me your hand after that."

Edith—"Dory, I'm afraid you've made a mess of it. Pa told me about the ten dollars, and said I'd better let you slide, that you were too easy."—Boston Transcript.

Significant Philosophy

"I am afraid Bliggins has met with reverses."

"What makes you think so?"

"He goes about with a gloomy look, saying there is no such thing as disinterested friendship. That is almost a sure sign that a man has been trying to borrow money."—Washington Star.

A Dangerous Question

Casey—"Whoi did Cassidy ivir marry thot widdy woman wid th' tin children?"

Murphy—"Shure, Oi dunnaw. Oi've niver dared ask him."—Puck.

Won't You

Write a Postal

To Get Well?

Send me no money, but simply write me a postal if you are not well. Pay when you get well.

I will send you a book that tells how a lifetime of study has enabled me to strengthen the inside nerves. Those are the nerves that operate the stomach, kidneys, heart, womanly organism, etc. Weakness of these organs means weakness of those nerves. Nerve strength alone makes any organ do its duty.

I will send you, too, an order on your nearest druggist for six bottles of Dr. Shoop's Restorative. Use it for a month, and if it succeeds pay him $5.50 for it. If not, I will pay him myself.

No matter how difficult your case; no matter what you have tried. If my book shows you that your trouble is nerve weakness—and most sickness is—I will warrant my Restorative to cure you.

I fail sometimes, but not often. My records show that thirty-nine out of forty who get those six bottles pay, and pay gladly. I have learned that most people are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Mine is the only way to restore vital nerve power. Other treatments bring but fleeting results at best. If you want to be well, let me send you an order for the medicine. If it cures pay $5.50. I leave the decision to you.

Simply state which book you want, and address Dr. Shoop, Box 910, Racine, Wis.

Book No. 1 on Dyspepsia
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Book No. 3 on the Kidneys
Book No. 4 for Women
Book No. 5 for Men (sealed)
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Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

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The Pilgrim	1.00
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Or We Will Send the Farm and Fireside One Year and Any ONE of These Pictures for 35 Cents

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The artist has caught one of life's great lessons and has portrayed it with a master's hand.

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These pictures, including the margins, are twenty by twenty-five inches in size, five hundred square inches. They are sufficiently large to preserve all the delicate effects of the originals. Without margins they measure about sixteen by twenty inches.

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The pictures have been selected with the greatest care, keeping in mind that they should be artistic, pleasing and inspiring. As such they will be ornamental, of the greatest artistic helpfulness and an influence for good.

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EXTRA PICTURE FREE In addition to this we will give a picture to any one who secures and sends us a yearly subscription at thirty-five cents for the Farm and Fireside and one picture as offered above, making one picture for the subscriber and one picture for the sender. When this offer is accepted both pictures must go to one address.

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	NAMES OF ARTISTS	
SUNSHINE AND SHADOW	*Stone*	No. 801
I AM LORD OF ALL I SURVEY	*Cleminson*	No. 805
DEFIANCE, or STAG AT BAY	*Landseer*	No. 789
AN IMPUDENT PUPPY	*Noble*	No. 804
GRACE DARLING AND HER FATHER	*Carmichael*	No. 803
ST. CECILIA	*Naujok*	No. 806
PHARAOH'S HORSES	*Herring*	No. 785
WATERFALL BY MOONLIGHT	*Rieger*	No. 795
CAN'T YOU TALK	*Holmes*	No. 794
KISS ME (Child and Dogs)	*Holmes*	No. 790
THE HORSE FAIR	*Bonheur*	No. 796
AFFECTION	*Holmes*	No. 783

	NAMES OF ARTISTS	
QUEEN OF FLOWERS	*Lefler*	No. 786
AFTER WORK	*Holmes*	No. 787
WASHINGTON CROSSING THE DELAWARE	*Leutze*	No. 797
THE WOODLAND MOTHER	*Carter*	No. 798
THE STRAW YARD	*Herring*	No. 799
IN MEMORIAM	*Edwards*	No. 800
THE LITTLE SHEPHERDESS	*Koller*	No. 791
PORTRAIT OF WASHINGTON	*Stuart*	No. 792
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Nickel-Silver Base The base of this ware is solid nickel-silver, which is white all the way through, positively will not change color or rust, and will wear for a lifetime. It is the highest grade known, being full twenty-five per cent nickel.

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Full Size The ware is all full size, the illustrations on this page being just two thirds actual size.

Knives The base of the table-knives is fine steel highly polished. This is first plated with nickel-silver and then with twelve pennyweights of pure coin-silver. Ask your dealer what twelve-pennyweight knives are worth.

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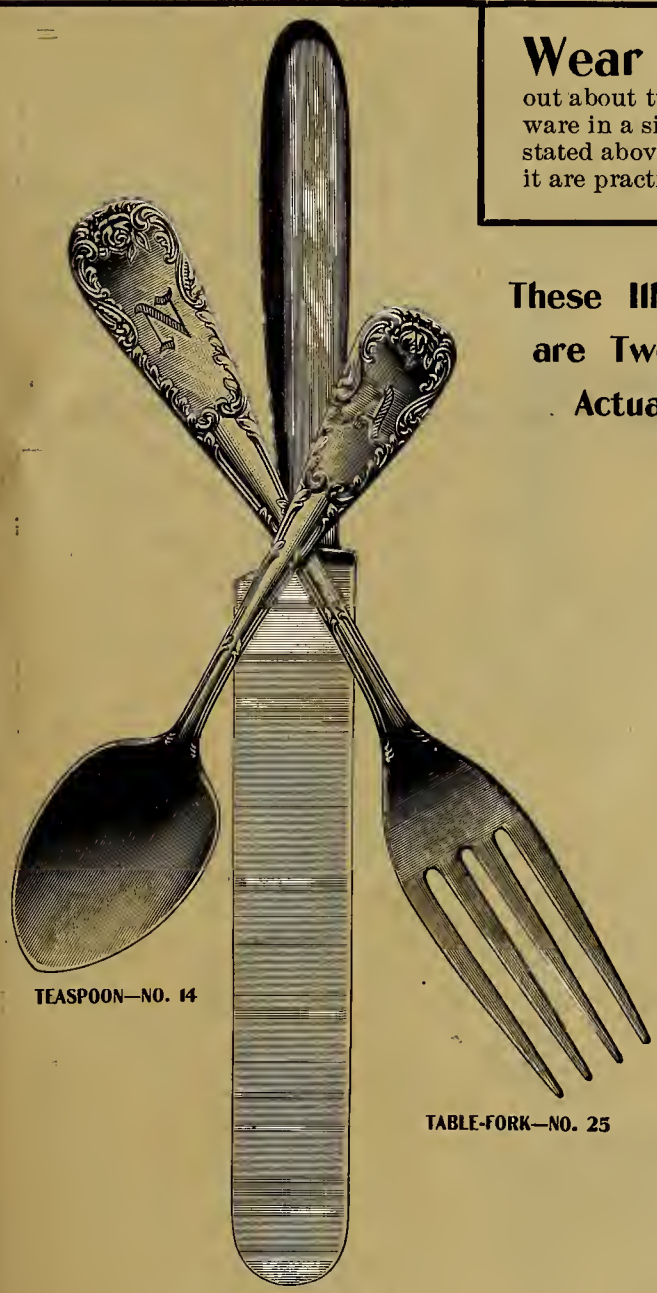

TEASPOON—NO. 14 TABLE-FORK—NO. 25 TABLE-KNIFE—NO. 29

AFTER-DINNER COFFEE-SPOON NO. 33 SUGAR-SHELL NO. 38 GRAVY-LADLE—NO. 58

BUTTER-KNIFE NO. 37 DESSERT-FORK NO. 32 BERRY-SPOON—NO. 39

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Set of 6 Teaspoons given for three yearly subscriptions
Set of 6 Forks given for six yearly subscriptions
Set of 6 Tablespoons given for six yearly subscriptions
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One Cold-Meat Fork given for three yearly subscriptions
One Berry-Spoon given for three yearly subscriptions
One Dessert-Fork given for three yearly subscriptions
One Gravy-Ladle given for three yearly subscriptions
One Child's Set (Knife, Fork and Spoon) given for three yearly subscriptions
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FARM SELECTIONS

Farm Centrifugal Cream-Separators

THE dairy business, ever the most important branch of agriculture, will ever so continue. Henry Wallace, than whom there is no better authority in the matters pertaining to general farming in the Northwest, told the writer at the meeting of Shellrock, Iowa, about two years ago, that the land values in the northern counties of Iowa where the creameries predominate range from ten to twelve dollars more an acre than they do in the south and southwest part of the state, where cattle-raising and steer-feeding largely engage the people. This being true it will be a cold, dismal day when the farmers of Iowa quit the dairy business. It has been suggested that the theme given me includes the farm-separator topic. Well, has the farm separator come to stay? Let statistics answer. From Mr. Norton's fourteenth annual report I quote the following: "While in no year has there been made a complete census of farm separators, yet the figures obtained are suitable for a comparison for the reason that in each year about the same proportion of the creameries have reported. The numbers show a remarkable increase from 904 in 1898, 1,762 in 1899 to 3,332 in 1900, or an increase of about ninety per cent each year."

At this ratio we must have at least 6,500 farm separators in the state today. To the question, "Do patrons take proper care of the cream?" twenty exclusively cream plants make reports—sixteen say "yes," one says "no," and five say "as good as they do of milk." To the same question twenty-seven creameries receiving both milk and farm-separator cream make report—twenty say "yes," two say "no," and five say "some do and some do not." To the question, "Do farm separators skim clean?" from the twenty-seven creameries receiving both milk and cream sixteen say "yes," four say "no," one says "better machines skim clean, others do not," and six report they "don't know." To the question, "Has the farm separator come to stay?" out of the forty-seven reporting forty-one say "yes," four say "no," and two are non-committal.

From these reports it will not be very hard to decide whether the farm separators have come to stay or not. In fact, when the present year's report shall have been published we shall no doubt find the farm separator pretty well intrenched among the dairymen of our state. It is true that at Jesup, Iowa, the farm-separator creamery has closed, but this fact cannot be taken as an argument conclusive against the farm-separator system. Creameries should be built only where they are needed. At Jesup there was in operation when the farm-separator creamery was started one of the largest and best-managed whole-milk creameries in the state, and when the new one started there naturally sprang up a contention and rivalry between the two. The result was only in accordance with established economical laws. The whole-milk plant accepted farm-separator cream as well as whole milk, and since the cost a pound of making a pound of butter in a creamery putting out a half car-load a week is always less than the cost a pound in much smaller creameries, it was evident to all observers that it was only a question of time when the new plant must close. —From paper read by Mr. A. E. Anderson before Iowa Dairy Convention.

Catalogues Received

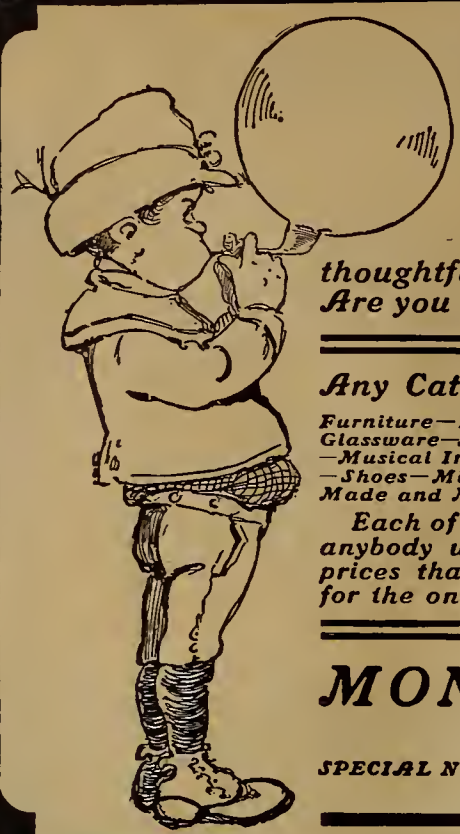
Samuel Cushman & Co., Bristol, R. I. Illustrated catalogue of Rhode Island Reds.

Humphrey & Sons, Joliet, Ill. Illustrated booklet of the Humphrey green-bone and vegetable cutter.

Bishop Furniture Company, Grand Rapids, Mich. Illustrated catalogue of "fine furniture direct," shipped on approval.

German Kali Works, 93 Nassau Street, New York. Illustrated pamphlet—"Fertilizing of Cane Soils in the Hawaiian Islands."

Sure Hatch Incubator Company, Columbus, Ohio. Illustrated catalogue of Sure Hatch Incubators, Common-sense Brooders and poultry supplies.



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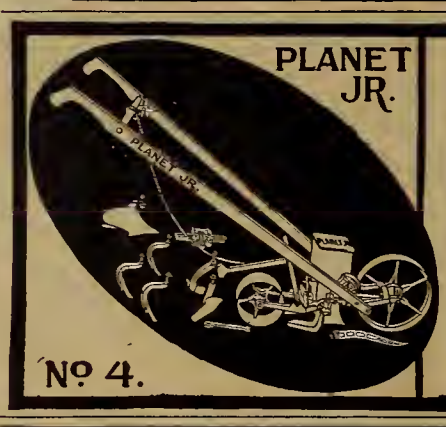

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presumes good planting and good cultivation. The best, safest and surest way to secure these results is from the use of the "PLANET JR" No. 4 Combined Hill and Drill Seeder, Single Wheel Hoe, Cultivator and Plow. The hopper holds two quarts of seed and will sow any garden seed in continuous rows, or drop it in hills, at five different distances. The index is tested and accurate, and the drill will in every case sow the amount of seed desired. Simply lifting the handles throws it out of gear. When ready to cultivate take off seed box and put on tool frame and it is ready for cultivating between or astride the rows, hilling up, plowing, etc. No tool has ever been made to equal it for the home, gardener or small farmer.

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Black, painted or galvanized metal ROOFING and siding (brick, rock-faced or corrugated)

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IN ELEGANT DESIGNS. Write for catalogue.

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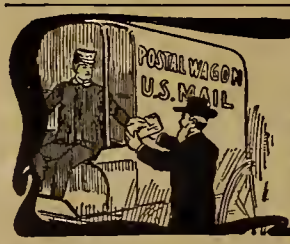

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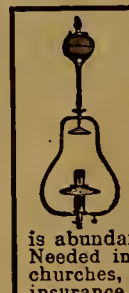

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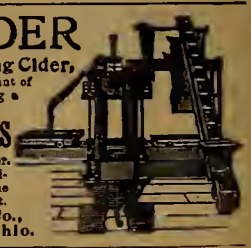

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The Highlands of Colorado—By H. A. Crafts

It must not be supposed that the higher altitudes of Colorado are all barren wastes. Up as far as timber-line there are varying grades and phases of vegetation. Timber-line is where the forest-belts end and the barren slopes begin. It is at an altitude of about twelve thousand feet above the sea-level. Nor must it be supposed that vegetation diminishes as the altitude increases, for the very heaviest bodies of timber lie just at timber-line. This is easily accounted for. To be sure, the summer season is short. But it is not so much heat as moisture that produces the vigorous growth that is seen here. The forests, parks and glades not only have the benefit of the great bodies of snow that naturally fall upon them, but they get all the drainage from the melting snows from the slopes and peaks that lie above them. The heaviest storms of summer-time also occur in these altitudes. The main forest bodies, too, are so dense that the snow that falls from season to season does not melt away until late in the summer, so completely is the ground shaded from the sun's rays.

So these upper regions are not characterized by those signs of aridity that mark the lower altitudes, where there is less snow, less rain, but more heat. The traveler who starts from the plains and ascends to timber-line is conscious of a very radical change in climatic conditions. There is a grateful moisture in the atmosphere. The ground is soft and springy beneath the feet. From beneath the dark shades of the forests gush cool breaths of air redolent with the scent of pine, fir and spruce. The changeful mountain breezes breathe alternately of the sun-kissed cliffs and the melting snow-banks, now bearing upon their swift, hurrying wings a shower of rain, a sudden drive of mist, and then pouring down upon all a flood of clear sunshine.

Nature seems choice of her treasures in proportion to their richness and beauty. Her brightest, her best, her purest are hidden far away among the mountain fastnesses, and are walled up by almost insurmountable barriers. She guards them jealously, and of those who view them she exacts a tribute in return—long, arduous, if not perilous, ascents, fatigue and privation, and sometimes a limb, if not a life.

Here in Northern Colorado she stands intrenched and fights valiantly against the encroachments, yea, the sacrileges, of a utilitarian age. Round about her strongholds whirl and eddy the changeful currents of modern commerce, yet she is comparatively inviolate. How long will she hold her own? The campfires of the enemy are already seen in the distance, and spies are already within her buttressed walls, seeking her vulnerable points. It is only a question of time when she, too, must surrender to the all-conquering foe.

The Cache la Poudre River was named by the early French-Canadian settlers of Colorado. The name translated means in a broad sense the "hiding-place of the powder." There is a legend connected with it, but with which I am not as familiar as I should be. It is something about a Frenchman and his son who were attacked and hard pressed by the Indians. Doubtful of their ability to hold out against the enemy at the point where they had been attacked, they fled one night and sought refuge within the canyon of the river, which is deep, narrow and rocky. They hid the bulk of their ammunition in a secret place in the rocks, and then, taking a stand in some rocky stronghold, successfully combatted their foe.

The Cache la Poudre has its rise in the midst of the Rocky Mountains. Near the southern extremity of the Medicine Bow Range lies Chamber's Lake. Out of this lake flows the river, making at first a journey of sixty miles down through an immense canyon to the plains, and then winding for about forty miles out on the plains, where it joins the waters of the South Platte. In the neighborhood of its head-waters lies some of the grandest of Rocky Mountain scenery; along its course plainsward some of the most picturesque, and bordering its plains section all that is charming to the eye in a Colorado agricultural district.

It is of the first-named neighborhood that I shall dwell upon in the present article, though volumes might be written of the others, and then not all of their interesting features fully described, for during the summer just passed I had the pleasure of visiting the highlands, and know whereof I speak.

The grand canyon of the Cache la Poudre should not be dismissed, however, without a passing word. It is not yet accessible from its lower extremity. Railroads and wagon-roads have been surveyed through it time and again, but none have thus far been built, as it is too difficult for the ordinary undertaking. But by a grand detour to the north you may enter it some thirty-five miles from its mouth. Then you may journey downward for a dozen miles or so, and upward to its very upper extremity. It is a deep passageway. Hills rise on either hand from a thousand to two thousand feet above the river-bed. Some are of gradual ascent, others are steep, and many are precipitous. There are rocky cliffs and wooded slopes. In places the canyon is a fourth of a mile wide; in others it narrows down to a rocky gorge, with high, steep walls. It has frequent turns, giving the traveler along its narrow confines an almost continual change of view. Through its center runs the river, clear, cool and never silent. It is bordered by meadows, and narrow strips of tableland wooded to some extent with pines, silver-spruce, cottonwoods and quakings asps.

All up and down the canyon are well-fenced ranches having comfortable houses, and barns, sheds and corrals for the cattle and horses. The meadows have been converted into hay-lands, and being well irrigated produce fine crops of native hay, a very nutritious forage, which is cured and packed away in commodious hay-sheds for winter use.

In the midst of these rugged surroundings is the home of John Zimmerman. Zimmerman is almost as picturesque as the hills that environ his home. Born in the Swiss Alps, he came to America when quite young, and settled with his parents in the great forests of Wisconsin. When little more than a boy he joined the California Argonauts and went to the gold coast via the isthmus. He came to Colorado twenty-two years ago, and settled in the canyon of the Cache la Poudre River because he thought it was the most beautiful place he had seen in all his wanderings, and most like his native Swiss Alps. Here he lives content, ranchman, hotelkeeper, miner, hunter, guide, a lover of Nature and a poet, though he has never put his inspiration into written words.

At Chamber's Lake the wayfarer encounters a fence and a pair of bars. There is a good deal of indefiniteness about them. It cannot well be determined from whence the fence comes, neither can it be determined where it goes. Yet it serves a well-defined purpose. It fences one tract fifty miles square of mountain country from another similar tract. In other words, it prevents the cattle of the North Park country, which lies beyond Cameron Pass and up in the midst of the Rocky Mountains, from straying out across the divide, and vice versa. Yet the time will come, I apprehend, when fences in this region will be run on much narrower lines. What shall hinder these alpine tracts from being settled up by thrifty ranchmen? Over toward the summit of Cameron Pass, on the North Park road, stand some weather-beaten log structures. The house is now occupied by a lone prospector. For four consecutive years, along back in the 80's, this was the home of John Zimmerman and his family. All up and down the pass are strips of the finest grazing-land. When I was there the grass was up to an animal's eyes. Zimmerman kept his dairy-cows there, and tells me that his wife made some of the finest butter and cheese that was ever made in any locality. And why not? Here is a healthful climate, the purest water and most nutritious of grasses.

A mile east of these ancient buildings, up a steep, wooded slope, is another

[CONCLUDED ON PAGE 5]

ZIMMERMAN LAKE, LARIMER COUNTY, COLORADO

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WITH THE VANGUARD

IN A comprehensive review of the business year Bradstreets' says:

"Constituting as it does the fifth successive year during which American trade, industry and speculation has expanded, each year setting up some new standards, which in turn have been relegated to the past because insufficient to longer express the progressive growth which the country has attained, the year 1901 can more justly, perhaps, than any year which has preceded it, lay claim to the title of 'record-breaker.' This is all the more true because, unlike any one of the four years which preceded it, 1901 witnessed and, indeed, suffered from a combination of happenings which in a normal year would have been classed as at least depressing, if not actually disastrous. The best proof, in fact, that new standards have been set up of late years, and that old rules no longer govern with hard and fast effect, is found in the steadiness of the onward march of things commercial and financial in the face of obstacles reckoned serious in past periods. A year ago, in writing of the situation and outlook, attention was called to the buoyant tone of general feeling and the confidence very generally felt as to the outlook. It is true that voices crying in the wilderness were not wanting which predicted that the best had been garnered and that progress had been stopped, if, indeed, the downward course had not already begun. The irregularity of some of the returns for the year 1900 lent color to these pessimistic predictions, and yet, looking back upon the records since made, the conviction must grow that the fall in prices in 1900, the shrinkage in clearing and a number of other signs of recession were merely evidences that the prosperity movement had paused to take breath, and digest some of the results of expansion preliminary to the further advance which has occurred.

"And yet this expansion has not been aided by general events, but has rather succeeded in spite of them. Several great industrial conflicts have occurred during the year, notably those of the machinists and of the steel workers; the great May stock panic did much to unsettle public confidence in values and in the far-famed community-of-interest agreements; several imprudently organized or managed industrial combinations have broken down, as have the efforts of still other combinations to arbitrarily fix quotations of great natural productions, such as copper; the typical American crop, corn, has been greatly shortened by long-continued drought; serious shortages in cotton and oats are indicated, and there is a decline, though slight, in export trade from a year ago, and last, but by no means least, the country has seen its executive stricken by the bullet of an anarchist. To make, in spite of all these drawbacks, the showing it does of gains in nearly all lines of industrial production is, indeed, proof that the old order changes and new sign-posts have been set up in the road of progress by which future travelers must be guided.

"Briefly summarized, the year has seen transacted an aggregate of general business, as reflected in bank clearings, far in excess of any preceding period; has witnessed stock speculation, rampant beyond the dreams of old-time brokers, checked and curtailed by one of the sharpest stock panics in history, and yet, with a remarkable minimum of disturbance of general financial operations; has watched general industry and production grow steadily until new and larger figures were needed to express the outputs of coal and ore, and iron and steel, and leather and lumber and a multitude of other branches; has seen the freight-transportation facilities of the country, strained to the breaking point, prove insufficient to handle the volume of business offered, and finally has witnessed a volume of holiday business passing all previous bounds both of quantity and quality, all of which are evidences of the vastly increased purchasing power of the general public of late years.

"Prices reached their highest point of recent years on February 1, 1900. In iron and steel the top was reached earlier than this, namely, the close of 1899. This advance, as usual in such movements, was overdone, and demand was automatically checked. The decline from the higher point was a steady one for a long time, and it was not until the summer of 1901 that the advance in food products, breadstuffs, hog products and, in fact, all agricultural produce, growing out of the shorter crop returns of all farm products, except wheat, brought about a rally which has continued ever since. Wheat has reached the highest point since 1898, corn and oats are higher than for almost a decade, and other produce has sympathized. Food products as a whole are higher than in the general prices boom of 1900, while manufactures are lower, notable in this respect being leather, textiles, coal and coke, naval stores, building materials, chemicals and drugs and miscellaneous products. Prices as a whole are eight per cent lower than February, 1900, and December, 1899, but are higher than in any year from 1893 until the third quarter of 1899."

THE New York Agricultural Experiment Station (Geneva) recently issued the following circular on the "Red Albumen" fraud:

"Poultry-feeders and farmers throughout western New York have been much excited during the past few weeks by the exploiting of 'Red Albumen.' Doubtless many of them have been victimized, for druggists report demands for this material almost unprecedented even in the sale of patent medicines, and so far as evidence collected by the station goes each purchaser has been defrauded.

"There are at least two preparations sold under the name red albumen, probably more; for the druggists in many places were evidently not supplied with the original material, but realized that the farmers were determined to be 'gold-bricked' anyway, and so met the demand by substituting compounds from their own stock. One of the preparations, that reaching the station under the label of the United States Salyx Co., New Concord, Ohio, has practically no feeding value, as it contains only one tenth of one per cent of protein (albumen) the remainder being almost wholly oxide of iron (red paint) and sand. No phosphorus was found, nor was there any evidence of strychnine or the newly discovered (?) 'alequet.' Unless fraud has been worked upon the Salyx Co., this is the original 'red albumen.'

"If so, instead of being worth fifty or sixty cents a pound, it is worth only from one to two cents a pound as 'mineral red' or 'ground iron ore' used for paint.

"Druggists or others, who have substituted some other product for the original 'red albumen,' have been less conscienceless toward the farmers; for they have sold an albuminous compound, probably a by-product which contains eleven or twelve per cent of nitrogen or about seventy-two per cent protein. This sells for varying prices, depending upon the druggist's mood; but usually at the price fixed for the original article, fifty or sixty cents a pound. Animal-meal, which supplies the best albuminoid matter for poultry, contains more than half as much protein and sells at from three to five cents a pound. W. H. JORDAN,
"Director."

CONCERNING the condemnation of colored oleo the "Chicago Dairy Produce" says:

"One hundred and thirty-three editors of leading agricultural papers of the United States have placed themselves on record as opposed to the coloring of oleomargarine in semblance of butter, and calling upon Congress through petition to enact into law what was known as the 'Grout Bill' at the last session. The petition which they have signed is as follows:

" 'We, the undersigned editors of publications devoted to agriculture, and representing the sentiments of the farmers of the United States, believing that future prosperity and welfare of the farmers of this country depends very largely upon the preservation of the dairy industry upon the farm, earnestly petition your honorable body to enact into legislation during the present session what was known in the last session as the "Grout Bill," which passed the house by the tremendous majority of one hundred and four, was favorably reported by the Senate committee on agriculture, and while occupying a privileged position on the Senate calendar, failed of passage because of the rush of important appropriation bills at the close of the session.

" 'We also protest against the substitution of any other measure which in any way eliminates the tax of ten cents a pound on oleomargarine colored in semblance of butter, and which cannot be lawfully sold in thirty-two states having four-fifths of the population of the United States.'

"The list of papers represented upon this petition includes every influential or well-known general agricultural paper in the United States.

"Every state which has a farm paper is represented. The southern agricultural papers are almost a unit for this bill despite the representations made by the oleomargarine-makers that the cotton-growers are against it and that it is detrimental to the interests of the South. The farm papers of all the cattle states favor the bill, they taking no stock in the claims made by the oleomakers that the passage of the measure would cause a loss of from two to four dollars a head on every head marketed.

"The Secretary of Agriculture of the United States is an ardent advocate of the measure; the National Grange and its more than a million members have taken vigorous steps in the direction of securing the passage of the bill; the National Farmers' Congress has thrice indorsed it at its annual meetings; the National Association of State Food Commissioners have not only indorsed it, but have delegated a member to look after its passage at Washington; every state department of agriculture in the United States favors the legislation; every state dairymen's association has indorsed it; the National Creamery Buttermakers' Association has been active in its advocacy of the measure, and the legislatures of seven states—namely, New York, Pennsylvania, Vermont, Wisconsin, California, Maryland and Minnesota—have memorialized Congress to enact the bill into law.

"Did ever any measure before Congress have more complete indorsement of agriculture? Was ever sentiment more united and concentrated to one end? Add to all these the thousands and thousands of individuals who have either through personal letter or petition appealed to Congress for the passage of this bill, and consider the fact that they come from every congressional district in every state in the United States, and some idea may be obtained of what the sentiment is behind this measure."

IN A recent address at Philadelphia on "The United States as a World Power," Associate Justice David J. Brewer said:

"The twentieth century brings us face to face with new conditions, and we are conscious that the United States of America have become a more important factor in the world's thought. Some fancy that the Spanish war wrought the great change. This is hardly so.—It may have cleared the air and brought us face to face with the consciousness of the change, but silent forces of commerce and religion have been at work for years bringing about that result.

"Again and again it is stated that the United States have now become a world power. So they have, but what is meant by the term a world power, and how are we to justify our right to that title? Not by the manifestation of military or naval strength. While wars will be as wars have been, and while there is within the resources of our country an undisplayed military and naval strength that makes her the most dangerous enemy on land and on sea, the dawn of the twentieth century unveils a greater national glory than can be won on any field of strife. While the events of the last two or three years have compelled an increase in our military and naval force; while the amount of money which is called for by the secretaries of war and navy seem to many too large, and while the roll of the drum and the blare of the bugle are more often heard, yet the sons of the pilgrims will never turn our country over to the man on horseback, nor will our dearest laurels be crimsoned with the blood of the dying soldier.

"We shall deserve to be called a world power because our relations with all nations will be carried on upon the highest principles of truth and justice. We stand in the council of nations strong enough to fear no attempt to wrong us; so strong that we cannot afford to wrong any, even the weakest nation; strong enough to be firmly just to the most powerful nation, and so strong that we must be kindly just with the weakest. We must be frank as well as honest. Henceforth, diplomatic language must be something to reveal and not something to conceal thought and purpose. The honesty we must practice is not the honesty of Shylock, measured only by that which is nominated in the bond, but that of the golden rule, an honesty which compels us to see the other party to the transaction.

"Into all the avenues of our official life is entering civil service reform—promotion by merit has ceased to be the joke of the politician and is coming to be the controlling rule of all official life—not merely in the army and navy (and we have had of late some very positive assurances in respect to them), but in all the departments of official life—national, state and municipal. Whatever may be the present defects in the machinery employed to secure the desired results, and very likely the defects are many, it is one of the bright assurances of the future that the thought and purpose of the people are turned in this direction, and they will not be thwarted."

RURAL AFFAIRS

Feeding Laying Hens Just at the present time with egg prices ranging in the vicinity of thirty-five or forty cents a dozen, even the few eggs that my flock gives me a day make the poultry nearly or quite self-supporting. The matter of five eggs from a flock of sixty Langshans—some old and some young, with at least fifteen capons among them—may look small, but it means fifteen to twenty cents a day, or about all that the feed costs me a day, so that the growth of the flock, especially in capons, and the process of fitting those that have not yet commenced to shell out eggs for this task is clear gain. The exact method of feeding which would most surely lead to success in egg production, especially during the winter, has been a matter of speculation and theory for a long time. But surely there are more ways to Rome than one, and if we follow the general direction (the leading principles) we must surely get there. It will make less difference in the general result whether we feed the warm meal in the morning or at noon, or even at night, and how we mix in the other grains during the day, so long as we give the required allowance in quantity and quality. The former, I believe, means all that the fowls will eat up clean; the latter (quality) includes two points mostly, namely, first proper proportions of flesh-forming and fat-forming substances, and second digestibility. A cooked warm mess, such as the one recommended by "Jimmy Rice," the proportions of which I have mentioned in an earlier issue, is surely more easily digested by the fowls than a feed of raw whole corn, especially when freshly taken out of the corn-crib during zero weather. The main feed, therefore, should preferably be the more easily digested and well-balanced mess, with whole grain during very cold weather given only after it has been kept in a warm room long enough to have the iciness taken out of it. With such feeding, the hens being confined in a comfortable house, given some exercise, fresh water or milk to drink, and the gritty materials needed to aid the process of digesting the grains, you may count on a fair egg product with some degree of certainty.

Exercise for Layers All authorities seem to agree on the proposition that hens to do well should have daily exercise, so as to get their blood in circulation. Some people wanted to feed a warm breakfast early, and then make the hens scratch for their dinner among litter strewn over the floor or in a shed. Others (and I now agree with them) think that it is a good plan to set the hens to scratching early in the morning. Wheat, oats, buckwheat, etc., may be scattered over the litter on the hen-house floor or in the scratching-shed for that purpose. At night we used to feed whole corn, so as to give to the fowls a full crop for fuel to keep them warm during the night. A few weeks ago a correspondent of the "Rural New-Yorker" told that instead of shelling corn he simply runs the ears through an ordinary feed-cutter, and then lets his hens pick the grain off the pieces. I have adopted this plan, and now give to my hens a quantity of such chopped-up ears early in the morning, to busy themselves with for an hour or two to get warm on. I find this a most excellent plan. It takes only a fraction of the time required to shell corn when we cut it up in the regular feed-cutter, and the hens seem to take to their task very readily and to have very little trouble in shelling every kernel off these short pieces.

Warm Sleeping-room for Hens Another very good idea comes from the same paper; namely, "Every hen her own stove." An experienced poultryman has the perches in his hen-houses arranged in such a manner that by closing a hinged drop door in front of the fowls on the roosts at night he has them virtually boxed up in a small space. Ventilation is provided by means of a five-inch wooden pipe entering the box from the outside, and being carried up near to the ceiling overhead, where the fresh air escapes and diffuses. The bad air at the same time is carried off by means of another such wooden pipe beginning near the dropping-floor under the roosts and being carried through the roof outdoors. There is an extra device, however, connected with this, for the purpose of creating a lively draft. Inside the sleeping-quarters, but somewhat above the perches, the pipe has a box-like enlargement, the sides being of thin copper. The warmth generated by the fowls underneath acts on the copper sides and is communicated to the air inside, which rises and escapes through the roof, thus creating a draft and sucking in the foul air at the bottom. In quarters arranged like this fowls will feel as cozy during the coldest night as in summer. There are circumstances which would make it feasible and profitable to warm a hen-house artificially; but under all ordinary conditions stove-heat will seldom give satisfactory results, and in a properly constructed hen-house is entirely superfluous. All that is needed is to keep the temperature from falling to the freezing-point. So long as the hens' combs do not get frozen, good results in eggs are possible.

A Cruel Practice Stopped President Roosevelt is reported to have given notice that there are to be no dock-tailed horses in the White House stables while he is chief magistrate, and the King of England has ordered that no such horses shall appear in the ceremonial procession of coronation-day. Hurrah, I say, for President Roosevelt and for the King of England. Such good examples set by these illustrious men should settle the matter for all time of making it fashionable and bon ton to have horses with perfect tails. A Buffalo police justice (bless his soul!) seems to have a very convincing way of inducing the people in his jurisdiction to quit the absurd and wicked practice of docking horses' tails. He has just convicted a man, rather brute, charged with docking the tail of a horse, of cruelty to animals, and fined him ten dollars, with this admonition, "In imposing this light fine I don't want to establish a precedent. I think the docking practice is cruel and barbaric, and I will fine future offenders as much as the law allows." The police justice in this state and all justices of the peace have the power to impose a fine up to fifty dollars, and imprisonment up to six months, for all offenses of this kind. Cruelty to animals is made a misdemeanor by the penal code of New York and other states. All such wicked and inhuman practices like docking can be stopped if people who witness them will make complaint to proper authorities, and if justices, rural as well as city, will make up their minds to act for that purpose. If docking a horse's tail means a sure fine of from ten to fifty dollars docking will soon be a forgotten practice. All other forms of cruelty to animals can be stopped in the same way. The trouble is that people who witness such practices, who see neighbors leave their farm stock without proper food and shelter, and inhumanly misuse the animals unfortunate enough to be under their control, get just mad enough to run to the other neighbors with a big story, but not mad enough to remonstrate with the offender or give him a threshing on the spot, or still better, make complaint before the nearest justice. They leave the poor animals to their fate, and let them lead a life of continuous torture rather than have the offending brute of a neighbor "get down" on them. An ounce of action is worth a pound of talking and purposeless kicking. In short, there is much room for improvement in these matters. The world is full of suffering, and suffering there will be as long as the world stands. But why not do our share to bring relief whenever we have the chance to do so? If I have any complaints about "docking horses' tails" in my jurisdiction as justice I intend to make the fine heavy, and I hope that every rural justice and every city police justice who may read this paper, as well as every one of them who do not, will join me in this proposition and conclusion. T. GREINER.

SALIENT FARM NOTES

Pork Prices Along in the early autumn a great many farmers were predicting that live hogs would reach eight or ten cents a pound before Christmas. They based their predictions on the great shortage in the corn crop, and declared that thousands of farmers would be unable to finish the pigs they had on hand or to hold over any breeding-stock. These prophets seemed to forget that we raised a tremendous crop of corn last year, and that thousands of farmers were dissatisfied with the price offered for it and held it, or a great part of it, over for the June market; and then when reports of drought began to move prices upward they held on to it still tighter. Then there was a good crop of wheat, a fair one of oats and rye and a very good one of hay, and all these proved to be great factors in the situation. Wheat, rye and corn were mixed, and the grass-hogs fatted and marketed, and there are thousands more to follow.

It is true the corn crop was short, but how short? One farmer near me husked twenty-four hundred bushels last year. This year he howled mightly because he got only a thousand bushels off the same land. Another raised about sixty bushels an acre on forty-five acres last year. This year he is all broken up because he got only a fraction over thirty bushels an acre from the same land. Another declared that he made almost a failure this year because his corn failed. Last year it yielded full seventy bushels an acre, while this year it would not go over thirty. He is in sad spirits. But I notice all these fellows are keeping the usual number of breeding-sows over, intending to run the pigs on grass, help out with sweet-corn, rape, etc., and finish them up with wheat, rye and the next corn crop. All are counting on big prices next fall. Corn is not going into market because it is going into hogs. Those who have corn to spare are holding it for higher prices, though it is now (December 16th) higher than the situation warrants. They are jubilantly prophesying dollar corn. They won't get it! When corn gets too high for hog and cattle feed consumption almost ceases. It is too high now, and those who would buy it for feed if the price were lower are feeding other materials and holding off for a slump.

Feeds I asked a farmer what he is feeding. He said he is feeding his horses hay and two light rations a day of mixed oats, bran and corn; his cows corn fodder and a mixture of bran and ground oats and wheat; his brood-sows chopped clover hay steamed and mixed with ground corn and wheat. Another said he fed his horses corn fodder with the nubbins in it and a little hay; his young stock the same; his brood-sows ground corn and middlings, with a little bran added. Another is feeding his horses hay and two light feeds a day of corn and oats; his cattle fodder with the nubbins in it; his pigs and brood-sows one feed a day of corn and one of a mixture of bran and middlings. Another said he is feeding more hay and less corn to his horses than he ever did; his cattle corn fodder, and his pigs a slop made of middlings and ground oats, with just enough corn to keep them warm and growing. A large number are feeding their horses and cattle corn fodder only, their sows and pigs only sufficient corn to keep them even, with three or four feeds a week of a thick slop of middlings and bran, ground oats and bran or corn-meal, bran and ground oats. Last year when corn was abundant and cheap all of these men were fairly shoveling it into their stock; now they are feeding just as little as possible. Nearly every farmer in the "corn belt" feels satisfied that 1902 will be a great corn year, because the land has had more than half a rest the past year and it will contain lots of available fertility, and they are preparing to plant a large area and to put forth their best efforts in growing a maximum crop. And as all know that hogs are about the most profitable stock to feed it to they are preparing to have a full supply of young porkers to take off grass and finish up with the first of the new crop. Any shortage of hogs will soon be made good. FRED GRUNDY.

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OUR FARM

Farm Facts and Fancies

THE FARMER'S BANK.—In the first month of a new year we incline to compare our financial condition with that of the previous twelve months, trying to learn what headway we are making. Very often there is not a big gain in cash, but I like farming for the very reason that there is constant opportunity for investing surplus dollars or extra labor in permanent improvements that add to the value of our capital. As we go along through the year we are following out plans that give us a better soil or better stock or better implements, increasing our earning power for the future. This is better than the accumulation of some money that would not bring us much income if safely invested in a loan or some outside enterprise. The farm is the best bank for a majority of us, and if it is improving we are gaining each year, even if little surplus cash is laid by.

A GOOD COMBINATION.—I like an occupation of such a kind that the daily work is almost a part of the homelife, and that labor and money invested either to increase income or to add to personal comfort tend to make one's property more valuable. On the farm any labor expended to make the place more attractive to the owners, adding to their pleasure in life, increases the market value of the property, and so there is constant inducement to add improvements. But I am sure some do not realize the possibilities along this line. They get the idea that wealth is needed to make a place attractive, and as wealth is not their portion in life, carelessness of appearances increases. It is a great mistake. Neatness is the great consideration, and some labor and taste can always secure neatness, order and a fair degree of attractiveness.

THE FARM WE OWN.—It is best that one be settled upon a farm he expects to keep as a home so long as he lives. If a change is to be made, it cannot be made too early in life. Then with a farm that is to be one's source of income and is to furnish one's home for life there is every reason for improving it. It is easy to get too many acres, especially if a mortgage goes with them. I want no more land than I can pay for surely and with fair ease; and then I can put time and money upon the improvement of each acre, as occasion permits, with the assurance that I am adding to the earning power of capital that will always be my own. I know then that the home is my own, and I plant trees, improve the roadside, make a pretty lawn and add to the attractiveness of my home by labor at odd hours with the thought that all my future years will profit thereby.

LACK OF CAPITAL.—I have known what debt is, and it appears to me that nothing cripples farmers more than the lack of cash capital for the best conduct of their business. The usual statement is that "we cannot do as well as we know because we are crippled by lack of money." It is a correct one. But farming is a business, and if some cash is needed to make it pay the best thing to do is to get the money at the lowest possible rate of interest and use it aright. This is assuming that one knows how to use it aright. If he does not, debt is a terrible thing and will eat up all the capital in time. But if the trouble is not in lack of skill and judgment, but only in failure to have the cash needed to do business profitably, I am sure it is better to get on a cash basis, refusing to pay credit prices or to owe little sums of money here and there, and to pay a fair interest to one man for the money absolutely needed to keep one on an economical cash system of living and working.

KEEPING CLOSE SHORE.—But very few men have reason to expect that they can carry any big amount of debt successfully because normal profits in farming are not large. The better way is to get away from the false idea that income in farming is in proportion to acreage. The most successful and best satisfied farmers I know have small farms. In thousands of cases it would be better to get the cash capital that is needed by letting some one else have some of the land, and by concentrating effort on a less area. Life would be made easier and brighter by such a common-sense course, and one could then do as well as he knew, being master of the situation and not a slave to necessity. Life is made hard to many a man and to his family by an effort to control more land than he has a right to try to own.

THE IDEAL LIFE.—There is no better life than that we may have on our farms, and more of us would appreciate this fact if we managed somehow to cut off some of the unnecessary burdens and to magnify the home feature. This means more concentration and fewer acres for some, and greater effort to secure comfort and attractiveness for the home. It means a nearer approach to the actual freedom, that farmers used to boast of, and less desire to add to the breadth of our possessions. Neatness, convenience, good income from fewer acres or fewer animals, mastery over what we have—all this may not appeal to the pride of an ambitious fellow, but it is the truest success and the foundation of the happiest, freest homes. In this new year let us take stock, and so plan that in the future we may drive and not be driven. Concentrate, reducing operations to the point that mastery is secured. DAVID.

Breeding the Dairy-cow

ABSTRACTS FROM A PAPER READ BY VALANCY FULLER AT THE NEW YORK BREEDERS' CONVENTION

In our efforts to improve the dairy-cow, to reproduce any given type, we are apt to lose sight of the fact that the improved modern cow is artificial. The function of the mother as she was originally created was to furnish only enough milk to nurture her offspring until it was able to take care of itself, and then go dry until the next calving. The formation of the habit of milking from calving to calving is the creation of man, and in consequence artificial. It is the triumph of mind over matter.

Being artificially produced there is a tendency on the part of the cow to revert to the undesirable characteristics of her ancestors. Even to breed from the best cows progeny equal to their dams is, as we well know, a matter of great difficulty, and it is this very tendency to revert to the undesirable ancestry that is responsible. The cow should be judged by the standpoint of her earning power, and yet we ought not, in striving after profit, to lose sight of the type she represents. Each of the improved dairy breeds has its own distinctive type; and it should be the object of the breeder to not only improve each succeeding generation in the dollar-earning capacity, but in the perfection of the type the individual represents.

I am not unmindful of the fact that there are those who teach the false doctrine that it matters not what the type of the pure-bred dairy-cow may be so long as one makes a profit for her owner, and she is to be judged simply by her ability to produce dairy products. This principle when applied to cows that are used only in the dairy, and are fattened when they cease to be profitable, may be correct, but the functions of a pure-bred dairy-cow is to be not only profitable in the dairy, but to reproduce her kind, and I am addressing a body of breeders who are not merely dairymen. Those who preach this false doctrine lose sight of the double functions the pure-bred dairy-cow has to perform. If she is merely a producer of dairy products, and not of her kind, she is valuable only during her lifetime, and leaves nothing behind her.

In the effort to breed for dairy products only, as in the case of the Jersey cow, without proper regard to the maintenance of the beautiful type Jersey breeders are so fond of, we have in too many cases bred a Jersey with a coarse, sloping rump and defective fore udder. Unquestionably those are accountable for creating the demand for the Island-bred Jersey in preference to the American type, who have advocated and preached the fallacious doctrine that Jerseys should be bred for production alone without regard to the perpetuation of the highest type of the breed.

Heredity is the transmission of qualities from parent to offspring. Considered in the bovine race, heredity may be defined as a natural tendency in certain directions, as characteristics or capabilities inherited from ancestors immediate or remote. Through years of persistent breeding by men of skill, given characteristics become fixed in the animals, and these are generally recognized as belonging to given strains.

Many breeders seem to think that by coupling two animals the resulting progeny will have in combination the characteristics of the two strains so coupled. They lose sight of the fact that there are prenatal influences at work to modify or alter the inherited characteristics. They assume the resulting progeny will possess the inherited characteristics of both sire and dam in combination, whereas one often reacts on the other, and the stronger prevails and is inherited.

It therefore seems better practice to endeavor to fix one characteristic by persistent breeding to that end. To secure the highest development of a single quality the energies are concentrated in that direction, and there is little force left to expend on the transmission of other qualities except those which are on the same line, but secondary to the dominant one. W. H. J.

Cow-peas

MANY USES FOR THIS WONDERFUL SOIL-RENOVATOR.—Every year finds more and more of our best farmers using cow-peas. The high price and scarcity of good seed-peas have prevented many from planting them, but they are beginning to realize that even at two dollars and fifty cents a bushel of sixty pounds for good reliable seed there is no fertilizer on the market which will add even one fourth the permanent improvement to the soil that follows the plowing under of a crop of peas.

I advise farmers to grow and save their own seed-peas. Those who do this will use them much more freely, and will not feel the expense. To grow for seed, use one third of a bushel of good seed-peas, drilled in rows thirty-two inches apart, and cultivate three or four times. By using an extra early variety, like the Mount Olive, the seeds can be fully matured as far north as Wisconsin and Michigan. Cow-peas will grow on poor soil, but much better on good soil or when fertilized with potash and phosphoric acid. I secure the best quality of seed by having the peas (pods) picked by hand.

Cow-peas, either green or when cured for hay, are greatly relished by horses, cattle and hogs, and are fully equal or superior to the best clover. Animals not accustomed to them must be fed sparingly at first, until they acquire a taste for the new food. By feeding the vines we secure both the feeding value and manurial value—a double profit.

I feed both horses and cows on cow-pea hay in winter. I cut for hay when the earliest pods turn yellow, and thus secure a larger percentage of grain in my hay, which is very rich in muscle-making elements.

Quantities of cow-peas are now plowed under here for wheat, also preparatory for corn. Not only are manurial elements added to the soil by plowing down a pea crop, but humus or decaying vegetation, rendering it porous and light, the effect on succeeding crops being similar to good stable manure.

PLOWING UNDER THE CROP.—I plowed under peas last fall, two large fields of them, having a wonderfully rank growth, being tangled and twisted in every direction and standing fully three feet high after lodging. I used a four-horse disk-plow, which turned two furrows at once, cutting twenty-two inches wide at each round. The disks cut the vines perfectly and turn them completely under. There is positively no clogging whatever, hence no stops on that account, a great saving in time. This plow does good work as fast as the horses can walk, and will turn four acres a day.

E. G. PACKARD.

A Remarkable Orchard

The largest apple orchard in eastern Indiana is that owned by Mr. Deolen Daugherty, in Wayne County. It cannot be claimed that the orchard is located in a famous fruit-belt, but the perfect fruit produced by this orchard and its regular and constant bearing have given the locality a wide local reputation.

The orchard was set out twenty years ago by the father of the present owner, Mr. W. H. Daugherty. He set out seven hundred trees on ground which he selected only after careful experimentation. He had given the subject of apple production much thought and investigation, and had become convinced that the quality and character of the soil had much to do with an orchard's production. He examined and compared the soils from many different orchards which had reputations for bearing or otherwise. Finally he selected a rolling piece of land on his farm where yellow clay and loam predominated. No attention was given to any natural shelter the surrounding country or woodland might afford for the trees, the quality of the soil being the only consideration that led him to select the site. As soon as the trees were well started to growing a systematic course of cultivation was followed. The ground was cultivated, the trees carefully trimmed and the roots thoroughly mulched with barn-yard manure. This process was continued until the trees were well started to bearing, after which a growth of blue-grass was encouraged.

From the time that the first blooms appeared on the young trees until the present season no year has been allowed to pass without the trees receiving a thorough spraying with a solution composed of one fourth of a pound of Paris green to forty-five gallons of water. This is all the spraying solution that has ever been applied to the trees, and, as was said, no season has ever passed without the trees being treated with the solution. When the bloom first starts to fall from the trees is the time the spraying is first done. Both sides of the trees are made thoroughly wet with the solution, which is applied with a force-pump in a tank. The latter is set on a light wagon and drawn about the orchard by a horse. The whole outfit, including the solution, is so cheap that any farmer with no more than one half dozen trees can afford to avail himself of the advantages it brings. There has never been a failure in this orchard, and the production has been as high as five thousand bushels in one year. Fancy prices were obtained for finest fruit, and there was rivalry among commission-men to procure it.

Mr. Daugherty found it necessary to thin out the apples on the trees several times, and even with that treatment, when the apples became ripe, the trees were loaded to their capacity. There were no unsound apples in this orchard. Out of more than a hundred that were opened not one was found with an unsound heart. This is the result of the spraying. These two facts should not be overlooked: Spraying has never been neglected, and there has never been a failure of an abundant crop of apples.

There are fifteen varieties of fruit grown in this orchard, which Mr. Daugherty believes to be too many. He considers the Ben Davis the best variety for the grower, because it is an abundant and regular bearer, with smooth and attractive fruit that will bear shipping and sudden and great changes in temperature and climate. Because of its keeping qualities it always commands a high price and a ready market. It is not a popular apple at home, but with shippers and dealers it is a long way in the lead. The Indiana Favorite Mr. Daugherty considers the second best. It originated in Wayne County, Indiana, and is a seedling from the Vandever Pippin, and is much like that excellent apple in color, shape and flavor, and is a better keeper. The Stark, another variety which originated in Indiana, is a fine apple, smooth, large, delicious in flavor and a good keeper. The Smith's

Cider, Baldwin and Rhode Island Greening come next in their order.

A word should be said as to the manner of trimming the trees that Mr. Daugherty follows. It is one of his theories that the lower branches are more sturdy and vigorous than those in the top of the tree; hence he strives to encourage the growth of the lower branches. It is is not uncommon to see lower limbs fifteen feet long and drooping to the ground. When bearing it is the rule to see the lower branches resting on the ground, where the bright apples glow on the green grass.

The accompanying picture of a tree that bore thirty bushels of apples illustrates the manner in which all of the trees are trimmed. That the method of trimming is a good one to follow is best judged by the results which this orchard affords.

This orchard, which occupies about twenty acres, yields almost as much income as a two-hundred-acre farm. Probably no product of the farm is destined to see such radical changes in its cultivation within the next few years as the apple and other standard fruits.

C. M. GINTHER.

The Highlands of Colorado

[CONTINUED FROM PAGE 1]

plateau, half open and grassy and half wooded. In the midst of it is Lake Zimmerman, deep and clear. Here John Zimmerman used to hunt in the days of yore, and has now established a hunting-lodge for the benefit of his summer guests. Here he is in his element. He will tire out the youngest of them on the hunt or mountain-climbing. The elevation is about eleven thousand feet. But think you that it smacks of barrenness or desolation? Not at all! A mile or two still eastward a bulky mountain ridge rears its rugged form abruptly from the edge of the plateau. It presents a face of bare cliffs, at whose base lies masses of broken stone that have been chipped off by the action of the elements for countless years, and that have rolled down into huge jagged piles. Near the northern brow of the ridge lie "The Craters," marked evidences of ancient volcanic eruptions. These indeed, as we enter them by a hard climb, present a picture of incarnate desolation. Even the rocks themselves have been burned to a flinty hardness, and no specimen of plant life, however small, finds a foothold among its seams and crevices. Another climb through prehistoric craters, over beds of lava and ancient beds of snow and up a steep and rocky acclivity brings us to the top of the ridge. Here we find another interesting feature. The ridge is not sharp, as we might have been led to suppose, but has an immense flat top; nor is its top barren, like its slopes, but smooth and grassy, almost like a lawn. "Just like the Swiss Alps!" says Zimmerman.

This flat top, I suppose, is what the Mexicans call a "mesa." Who would ever expect to find such a delightful place perched away up among the mountains at an altitude of say twelve thousand feet. The grass is short and of almost uniform height. All among it is an infinite variety of curious stones, pebbles, crystals, etc., from which the tourist is bound to select fine collections of specimens. Outside of its immense grass-plats the mesa has one distinctive feature—great beds of ground spruce, that grow in low, thick masses, completely covering the ground, and furnishing hiding-places for grouse, ptarmigans, chipmunks, etc. These skyey pastures, Zimmerman informs me, are the native haunts of the mountain-sheep. But why should they not furnish excellent pasturage for fine Swiss cattle, common sheep and Angora goats? And why should not this region of incomparable natural beauty in time be dotted with picturesque Swiss cottages, the homes of citizens who shall succeed in throwing off the thrall of modern luxury and effeminacy and delight in the natural pleasures of life? Or if we must introduce conventional life into these sacred precincts of Nature, what more delightful croquet-grounds, tennis-courts or golf-links could be found than these lofty mesas? Some miles south of "The Craters" there is a more gradual ascent, and Zimmerman says that another year he will construct a good wagon-road from the lake to the summit.

But the view abroad! That transcends all else. We look backward over the pass! Far below us lies a green, long valley, green pastures and greener forests, the lake midway, its waters blue, and Zimmerman's snow-white tents by the margin. Beyond rises the western slope of the pass, a belt of dense pines, and towering above them the bare peaks of the Medicine Bow Range tinged here and there by the faintest green of delicate grass mantles, but tinted by a universal overcast of brick-dust red, from the peculiar composition of earth and rock, yet with here and there a splotch of perennial snow.

The weather is whimsically changeful. Wild, scampering breezes blow out of the west, bringing up from the great North Park country hurrying, frowzy masses of rain-clouds, that here pour down an apronful of rain-drops, and there part and let through a sheeny burst of sunshine. Zimmerman regrets the weather, but I do not. The great panorama is complete. Soon the west wind unfolds a gossamer curtain, shakes it down into the valley and stretches it as far northward as Chamber's Lake. Deftly it tosses the silken fabric, shaking out the thicker folds, until the faintest glimmer of the slopes beyond is visible, and then finally mingling a shower of sunshine with a shower of rain-drops, until we behold before us a sort of celestial transformation scene.

But why rhapsodize? If we begin, where shall we end? On every side the wonders of earth and sky are repeated and multiplied and changed in quick succession, like the revolutions of a vast kaleidoscope. We can but suggest; the imagination of the reader must complete the picture.

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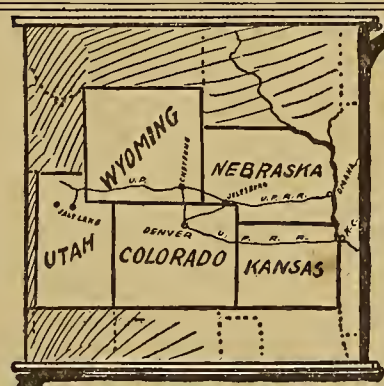

5 Great States

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Notes From Garden and Field

HOTBEDS AT THE SOUTH.—A few weeks ago a reader in one of the more Southern states asked me for information on making hotbeds for growing tobacco-plants. The time-honored practice of burning a big brush-heap on some sheltered spot, working the ashes well into the soil, and then using that spot for a tobacco-plant bed is still generally practised in the Southern tobacco-growing localities, and it does well enough for a makeshift, but it is hardly more than that, and it has serious drawbacks, the chief ones among them being the necessity of waiting for settled warm weather in spring and the abundance of weeds which spring up on most of the spots selected. The more aid Nature gives to struggling mankind, the less efforts man will make to get along. The natives in some tropical countries, where Nature just lavishes her gifts on man, who might have every comfort and convenience of life with little exertion, will not make any effort in that direction at all except planting a bread-fruit tree, which he depends on to furnish him and his family the material for his meals for the rest of his natural life. Here at the North, if we wish to have our share of soil products, and during the greater part of the season we have to make a fight for such privileges, for Nature will not yield them to us without effort, we have to resort to greenhouses, hotbeds, etc., and start our plants early in the season. The Southern grower, however, seldom lives up to his opportunities, and makes few efforts of his own to crowd the season, being content to wait for the time when Nature will grant her blessings almost unasked, and surely without much compulsion. Southern people as a rule could do much better than they are doing in these respects. I say this, however, without wishing to assert that all Northern people do all they can in the same direction. Even the use of cloth-covered sash in place of the regular glass sash more commonly used here would be of some help to the Southern grower. In a general way, however, I am not in love with even the best oiled muslin as a means of protecting early plants, and I believe that it will always pay at the South, as well as at the North, to use the regular hotbed sash for covering early-plant frames. This is especially the case in starting tobacco-plants even in the Middle states. Instead of depending on a spot in the open, of rich loam, and fertilized with the ashes from the brush-pile burned on it, better make a good, regular hotbed and start your plants a number of weeks earlier than could be done in the old-fashioned way. You may put the heating material on the top of the ground, say two feet high and well tramped down, and then set a frame of plank on top of that, the frame being of the right size to fit the sashes. I prefer to make an excavation, say two feet deep, in which to pack the heating material, so that the frame stands near the ground.

MATERIALS FOR HEATING HOTBEDS.—Fresh horse manure is the material most commonly used for hotbed-heating. If this contains some urine-soaked litter, and if a small proportion of dry forest leaves are mixed in with it, all the better. I prefer manure that comes from horses that are heavily worked and well fed. Sheep manure is also good, and I have seen hog manure that was quite serviceable for the purpose. The manure should be piled up loosely until it comes into a lively heat, then repeatedly forked over until it can be put into the bed and well-packed down, with some assurance that it will heat up and continue in moderate heat for some weeks. I have occasionally used the spent hops as it may be had from the brewery as heating material for hotbeds, and it seems to answer the purpose very well, giving prompt, moderate and lasting heat. At the South I am told that cotton-seed hulls are available for the same purpose, although I have had no personal experience with them.

HOTBED SOIL.—The best soil for frame use, and also for the greenhouse bench, is that made from sods cut from a rich old pasture. This is fibrous and just in the right shape to promote the germination of seeds and the thrifty and healthy growth of plants. If the sods are not very rich or the soil is a little stiff it is well to put the sods in alternate layers with manure, and letting the whole rot down thoroughly, spading the whole heap over repeatedly. In very dry weather (as summer is the proper time for making such composts) water or liquid manure may have to be applied to the heap in order to assist the process of fermentation or rotting. Such compost may be coarsely sifted, and will then be ready for use. In growing plants which are quite small and feeble at first, like tobacco-plants, there may be danger that the weed-seeds, which often abound in the compost, may grow and crowd, or possibly choke out, the plants of our crop, and in many cases it may be advisable to sterilize the soil. This can be done where a system of steam-pipes is available for the job, or where steam can be applied to the soil in such a manner as to heat it up to near the boiling-point, thus killing all weed-seeds as well as insect life with which it may be infested. I have only rarely done this, however, as it has not usually been found necessary. When the compost is repeatedly spaded over, then allowed to be left outdoors in a loose heap until cold weather sets in, you will find many of the weed-seeds already sprouted and killed, and very little insect life remaining in that soil. Then when the seed is sown (always in rows) the young plants are closely watched and the beds kept clean from weeds in or between the rows.

LATE CAULIFLOWERS.—Owing to long-continued dry weather last summer and fall my late cauliflowers took so tardy a start and made growth so slowly that a good portion of the crop did not have time to head up fully. But I did have some excellent close and compact, though rather small, heads—regular baby beauties. My plan with late cauliflowers is to sow the seed directly in open ground where the plants are wanted to remain, and thin to one plant in a place. The ground is made very rich and thoroughly prepared, and then marked out lightly about three feet apart. T. GREINER.

Orchard and Small Fruits

CONDUCTED BY SAMUEL B. GREEN

Moth-catchers

After a very careful trial of moth-catchers, some of which have been advertised extensively for the past year, the Missouri Experiment Station in a bulletin on the subject reports as follows:

We can say that the moth-catcher is the best thing that can be used in large fields for the corn-worm moth, for the fruit-leaf roller, for the pickle-worm, moth, and for the June or May beetle. Let it be definitely understood, then, that we recommend the moth-catcher for no other insects than those named, and that for the tent-caterpillar, the army-worm and the cutworm there are other methods of fighting these insects that are much better.

We wish now to impress upon the people the fact that these moth-catchers absolutely will not catch—except now and then one by mere accident—the following common injurious insects, which the advocates of the moth-catchers claim are caught: The codling-moth, Colorado potato-beetle, plum-curculio, gougers, flat and round-headed apple-tree borers, peach-tree borers, tomato-worm moth, squash-bugs, canker-worm moth, cabbage-butterfly—adult of the common cabbage-worm, bud-worm moth, "grape-vine moth," "currant-moth," "slug-moth" and strawberry-root borer.

In using the traps for the insects just named, and for thousands of other injurious insects that we have not named, one not only does no good, but actually does a great amount of harm; in the first place, by failing to catch the insects wanted, and in the second place, by killing immense numbers of ichneumon-flies and other beneficial parasitic and predaceous insects. Hence, for the various reasons given, the indiscriminate and ready use of moth-catchers renders them unsafe, and it is for these reasons that trap-lanterns of all kinds have justly been called "humbugs." In all our experiments in orchards with these moth-catchers we have captured only two codling-moths and one round-headed apple-tree borer; we have taken no peach-tree borers, no flat-headed borers and, with the exception of the tent-caterpillar and fruit-leaf roller, none of the other common injurious orchard insects.

Taking it all in all our experiments show that the general use of moth-catchers would be a detriment, especially in orchards, because of the fact that very few people indeed are able to recognize the pests which they wish to catch, and hence cannot determine the proper time during which the traps should run; they are not able to recognize the immense number of beneficial insects which are killed, to say nothing of the great number of insects of no economic importance either one way or the other which are also caught in immense numbers, and, therefore, deceive people into the belief that the traps are doing good and should be run.

Peach Culture

Peach culture is a specialty with Mr. R. Morrill, of Michigan. He applies annually to his trees one hundred pounds of wood-ashes an acre and four hundred pounds of bone-meal. He plows the ground about two and one half inches deep just after the blooming season, and then cultivates continually going over his whole orchard of one hundred acres every week. He does not try to cultivate close to the trees, but thinks that by cultivating the middle of the rows each way he gets the result aimed at; namely, the retention of the moisture. This is what he calls "horse-leg irrigation."

Inquiries Answered

Scale on Oranges.—C. H., Minnesota. The scale which infests the oranges which you send resembles very closely San Jose scale, but is the greenhouse form closely allied to it, which is not especially injurious outdoors.

Locust-borers.—C. E. C., Abbyville, Kan. You need not worry about the borers from your locust wood entering the apple-trees, as they are of a different species. The borers will undoubtedly live in the locust wood until next spring, and then probably come out from it and be ready to enter any other locust-trees there may be near by. Even if you were to pile the locust wood at some little distance from the orchard the chances are that the moths would range all over the whole section for several miles.

Snowy Tree-cricket.—B. M., Canonsburg, Pa. The branches of the peach-trees which you inclosed are infested with the eggs of the snowy tree-cricket. The mature insect of this is the green cricket that comes into the house in autumn, and by its chirruping noise is so annoying. It does not do any especial harm to the trees except that it so weakens the branches that they are liable to break off, especially when they are loaded with fruit. This insect infests not only peaches, but raspberries, blackberries and almost any plant that has rather soft wood and a large pith. The only practical remedy is to cut off and burn any infected portions during the autumn, winter or early spring. If this is done the insects will be materially lessened, since they winter over only in the egg form.

To Root Cuttings.—J. C. P., Manatee, Fla. Probably the best way to root plum cuttings, or cuttings of similar plants, would be to make them up from the young growth, about eight inches long, as soon as the leaves fall or strip off easily from the wood. Tie them in bundles of about fifty each, and bury in the ground with the bottom end up, covering them with about two inches of soil. As soon as growth starts in the spring cover the soil over the cuttings with about twelve inches of heating manure, so as to get the bottom of the cuttings warmer than the tops; or you may put a box around the cuttings and put on a sash and allow it to warm up under the sash, and in this way warm the butt cut of the cuttings. Treated in this way I think you will have no trouble about callousing them before they are planted out; in fact, they should not be planted out until they are well calloused, or they are very apt to fail, except possibly under the most favorable conditions. You probably know that comparatively few varieties of our plums are started to advantage from cuttings. This treatment is quite successful in the Southern states, but in the North it seldom succeeds.

Giant Flowering Caladium

Grandest foliage and flowering plant yet introduced. Leaves 3 to 5 feet long by 2 or 2 1-3 feet broad; perfectly immense, and make a plant which for tropical luxuriance has no equal. Added to this wonderful foliage effect are the mammoth lily-like blossoms, 12 to 15 inches long, snow-white, with a rich and exquisite fragrance. Plants bloom perpetually all summer in the garden, or all the year round in pots. Not only is it the grandest garden or lawn plant, but as a pot plant for large windows, verandas, halls, or conservatories, it rivals the choicest palms in foliage, to say nothing of its magnificent flowers. Thrives in any soil or situation, and grows and blooms all the year, and will astonish every one with its magnificence—so novel, effective, free growing and fragrant.

Fine plants, which will soon bloom and reach full perfection, **25c. each; 3 for 60c.; 6 for $1.00** by mail, postpaid, guaranteed to arrive in good condition.

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APPLES $7 **IT'S NO DREAM** this selling apples at $7 a bbl. It is the actual result of careful spraying of trees with the wonderful **HARDIE SPRAY PUMPS** They are suited to every condition and all fruits. Strong, durable and last long. Suitably. Endorsed by best fruit growers. Send for free Catalog and Spraying Formulas. THE HARDIE SPRAY PUMP MFG. CO. 64 Larned St., Detroit, Mich., U.S.A.

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HONEST TREES—honest in quality honest in price. We pay freight. Apple, 3 to 4 ft. $6; cherry, 2 to 3 ft., $15; freestone peach, $1; Concord grape, $2 per 100. 1000 Ash, $1; Catalpa, Locust, R. Mulberry, B. Elder and Osage Hedge; low prices. Catalog free Galbraith Nurseries, (Formerly Jensen Nursery) Box 45, Fairbury, Neb.

WEST MICHIGAN TREES. Buds cut from bearing trees insure stock true to name. Two million apple, peach, cherry, plum, pear and quince. ORNAMENTAL STOCK. Order direct at wholesale prices. Write to-day for beautifully illustrated free catalogue. West Mich. Nurseries, Box 11, Benton Harbor, Mich.

Biggest Corn Ever Grown Ears 16 in. long; yields 100 bu.; matures in 95 days. Send 20c. silver for sample qt. We guarantee you can sell every ear you raise for seed at $1.00 per bu. Mammoth Corn Co., Blencoe, Iowa.

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UNCLE SAM, ROCHESTER and the FLOWER CITY Twin Compressed-Air (capacity ½ to 45 gallons), 14 patents. **SPRAYERS** Agents wanted. Send for circular and terms to the BROOKS' SPRAY PUMP CO., 818 So. Ave., Rochester, N. Y.

FRUIT Trees, Plants and Vines of all kinds—150 acres Established 1869. Stock best, prices lowest. Catalog Free. Geo. A. Sweet Nursery Co. Box 1863, Dansville, N.Y.

THE POULTRY YARD

CONDUCTED BY
P. H. JACOBS HAMMONTON N. J.

About Feeding—How Much

DO NOT feed your fowls three times a day, and do not feed two much. You will get more eggs by moderate feeding on a variety of food than by giving food in abundance. It is not inferred that the fowls should be deprived of a sufficiency, but do not pamper them. Twice a day is often enough to feed them. Let them work, scratch and keep warm by exercise during the interval between meals. There is no fixed quantity of food for a flock. A flock is composed of a number of individuals, and they differ in desires, habits and general characteristics. No two of them will eat the same quantity, nor will a flock consume the same amount every day. One must learn to feed by observing the fowls. Do not depend upon corn and wheat. Give meat, cut bone, cut clover, cooked roots, sliced roots, and other materials that can be utilized. It has been claimed that one quart of corn or wheat is the proportion for a dozen hens for one day; but no one with judgment would attempt to feed wheat, corn or any other grain exclusively, hence to arrive at a knowledge of the "equivalent" of the grains when some other food is used as a substitute would be difficult. It is an impossibility to fix upon any quantity of food to be given daily to a flock. Laying hens should have more than non-layers. Large breeds necessarily consume more than the smaller breeds. All fowls require more food in winter than in summer. Less food is necessary when the quarters are warm than when cold; in fact, there are so many conditions to consider when the daily allowance is to be decided upon that any rule laid down for the management of one flock will not apply to any other. One cannot even be governed by his neighbor's methods. The only safe method is to observe your flock, and learn for yourself how to regulate the quantity of food.

White Minorcas

The White Minorca should have a red face and white ear-lobes, as in the Black, which it also resembles in size, shape, carriage and symmetry. In size the White are said to have a slight advantage, being somewhat larger, but it is not so claimed in the "Standard;" as to vitality and productiveness it stands on an equal footing with the other variety, and has the reputation of being a great layer of eggs, large and uniform in size and color, and of the same delicate flavor. The plumage is snow white, and should be without a single stain. It is not known how it was produced, but as all black birds occasionally throw white chicks no doubt the white variety was thus accidentally originated, improved and perfected, until we have one of the most attractive looking and truest breeding varieties among our domestic poultry. The chicks are very remarkably precocious, and mature very early, the pullets sometimes laying at twenty to twenty-four weeks old. They are not much unlike the White Leghorn in color, shape and general appearance, though they are larger in size than the Leghorns. The main difference in the appearance of the two breeds is in the legs. In this variety of Minorcas the legs are of a pinky white, while in the Leghorns the color is yellow. The Minorca also has a larger comb.

Liming the Grains

New methods are worth trying, hence attention is called to the claims of a French poultry expert, who states that good results are obtained by giving the fowls grain that has been limed, the same as grain prepared for sowing. By so doing it is affirmed that hens will begin to lay sooner and also lay more eggs than the average. Without showing special fondness for such grains the fowls eat it perfectly. This diet, he affirms, is harmless, provided it is not continued too long. Wheat is generally used for that purpose. However, all grains—barley, oats and corn—can be treated in this way. For the benefit of those who may not be informed in preparing grain for sowing, the method of preparation is to take a quart of unslaked lime and slake it in about ten or twelve quarts of warm water. Heap up the grain that is to be limed in a conical shape, and pour on the center of it the whitewash, previously stirred and thoroughly mixed with a stick. Then take a wooden shovel and stir the heap until all the grain has been soaked sufficiently. Before feeding it let it be spread out and dried. This mode of preparation has the additional advantage of freeing the grain from certain parasites or germs which might affect the health of the fowls. The above is easily tried, and will cost only the labor of preparing the grain and the very small amount of lime used. The experiment is new to this country, hence it should be done cautiously.

Locations for Poultry

Do not have too many fowls. Some enterprising amateur gets an acre of ground, puts on it a large number of fowls, and when the chickens come on in summer all goes well for a time; but about the second or third year a change comes, disease breaks out and many die, so the venture fails; yet a tenth part of the birds might have paid well. Overfeeding is bad, and is all the worse when there is not plenty of exercise. Hens neither lay nor sit well when they are overfed. Another cause of loss is keeping the birds on damp, cold ground. Dampness is liable to, and does, cause many of the complaints from which the birds suffer. Gravelly ground answers best, but other ground with more moisture in it may be made healthy by proper draining.

Cooling Dressed Poultry

One of the causes of loss when poultry is dressed for market is the failure on the part of some to give proper attention to details in the cooling of carcasses. No farmer would kill a hog in summer and expect the carcass to keep well, and the same difficulty arises with poultry, especially as some markets require the birds to be undrawn, and hence it is not easy to cool the carcasses thoroughly. After all the feathers have been removed place the carcasses in ice-water, and allow them to remain in water from ten to twelve hours. The water will remove not only the animal heat, but gives the carcass a fresh appearance. If the market is near by, pack the carcasses in ice in barrels. Always ship dressed poultry by express.

Correspondence

REMEDY FOR MITES.—I would like to give you a remedy for mites, as the complaint is so general. Use cedar scattered in the poultry-house and in the nests. In a few days there will be no mites remaining. This remedy never fails, and saves a vast amount of labor and annoyance. A. M. A.

Cedar View, Miss.

Inquiries Answered

Swollen Heads and Eyes.—A. B., Fruita, Colo., writes: "Can you inform me what can be done for some of my hens? At first their eyes begin to contain matter, and then their heads swell. Otherwise they are apparently healthy."

REPLY:—They have probably been exposed to overhead drafts on the roosts at night. Keep them on straw (no roosts) for a while, and anoint heads and eyes with camphorated oil or vaseline.

Not Laying.—L. R., Hardyville, Ky., writes: "I have fifty hens, and have not gotten an egg since last summer. I feed table-scraps, corn, wheat, sometimes cracked walnuts, and all the milk they can drink."

REPLY:—The probability is that you feed too much and too often, your hens being excessively fat. Reduce the grain food, keep the fowls in a warm poultry-house, and give ground meat, dried blood, and cut clover hay scalded, feeding only twice a day.

$1,000.00

We offer one thousand dollars to be given in premiums on Butter at the next Annual Meeting of the Vermont Dairymen's Association if the "Société Anonyme Separator" **did not** exhibit a **Radiator** at the Paris Exposition, 1900; and provided the DeLaval Separator Co. will give the same amount if the "Société Anonyme Separator" **did** exhibit a **Radiator** there.

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We offer one thousand dollars to be given in premiums on Butter at the same meeting as stated above if the Aktiebolaget Separator **did not** have a large exhibit at the Paris Exposition, 1900, and **did not** distribute circulars in its own name; and provided the DeLaval Co. will give the same amount if the Aktiebolaget Separator **did** have such an exhibit, and distributed such circulars.

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We offer one thousand dollars, to be given as above, if the statements given below of the work of the U. S. Separator and the DeLaval Separator in the Model Dairy at the Pan-American **are not** stated as given by the Superintendent of the Model Dairy, viz:

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VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.

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$5 INCUBATORS FREE 50 EGG SIZE
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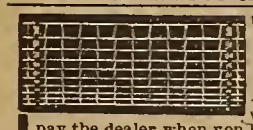

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

May be a Suppurating Corn.—W. F. C., Swanville, Minn. What you describe very likely is a suppurating corn. Have your mare examined, operated on and treated by a veterinarian.

Big "Lump" on the Face of a Horse.—C. M., Belt, Mont. The nature of the morbid growth on the face of your horse, described by you as a "lump" as big as your fist and as soft as cheese, and painful only when pressed, cannot be ascertained from your description. I therefore have to advise you not to interfere with it in any manner until either a veterinarian or a physician has examined it and ascertained its nature, its source and extent.

Boils (?) Inside of the Teats.—S. C. F., Gunnison, Colo. You say, "My milk-cows have boils inside of teats," and do not give a word of further description. If "inside of teats" means the interior of the teats, and that is the only interpretation I can give to it, I am at a loss to know what you mean. If that "inside" is a slip of the pen, and means outside, or in the skin, the boils might be cow-pox.

So-called Ringworm.—J. D. S., Buffalo Lake, Minn. What you describe appears to be a case of so-called ringworm, a cutaneous disease produced by vegetable parasites, and communicable from one animal to another. You can free your calves of the disease by destroying the parasites by painting the diseased patches once a day, for a few days in succession, with tincture of iodine (to be applied by means of a so-called camel's-hair pencil), provided all the bedding, etc., no matter whether soiled or not, is promptly removed and the stable and all stable utensils, but particularly feed-box, currycomb, brush, etc., are thoroughly cleaned, and, according to circumstances, disinfected. If this latter part of the treatment is neglected, sooner or later a reinfection will take place.

Knuckling Over.—Rub Their Tails.—A. B. G., Elcho, Wis. If your horse, now ten years old, has been knuckling over when standing in the stable for two years, and is not lame, a restitution to a normal condition will be out of the question.——If horses rub their tails, the cause of the irritation inducing them to do so is not the same in all cases. So, for instance, horses are apt to rub their tails if so-called pinworms are present in the rectum; but more frequently the cause of the irritation will be found at the root of the tail itself, consisting in an accumulation of epidermis scales and beneath them either some animal or vegetable parasites. If the pinworms constitute the cause, a few injections of raw linseed-oil, about a pint at a time, into the rectum, will soon expel them, and if the last-named cause is found to be producing the irritation, it will be advisable to first thoroughly wash the tail, but particularly the root of the same, with soap and warm water, and then once a day, either with a five-per-cent solution of creolin in water, or with a five-and-one-half-per-cent solution of corrosive sublimate, to be continued until the itching ceases. The object of the wash with the soap and water is to remove the epidermis scales and to clean the skin, while the repeated washes with the antiseptics are made for the purpose of destroying the parasites.

A Horny Scar.—N. B. E., Swanton, Ohio. What you describe is a horny scar, and permanent. Such a wound as was produced six months ago by an entanglement in a barbed wire on the fetlock of your horse, unless brought to healing without any suppuration and without loss of tissue (by first intention), will always produce and leave behind a more or less extensive horny scar. The latter will be the larger and the more conspicuous the larger and the deeper the wound, the greater the loss of tissue and the longer it took to effect a healing. Such a scar, it is true, can in favorable cases, be excised by a surgical operation, but to do this is advisable only if it is reasonably certain that the borders of the new wound can be brought and kept in contact and cannot be kept united either effect a firm union, and where, at the same time, a healing without any suppuration (or by first intention) can be secured. Where such a reasonable certainty does not exist, or where, after the excision has been made, the borders of the new wound cannot be brought in contact and cannot be kept united, either by bandaging or otherwise, and where a healing by the first intention or without suppuration cannot be effected, the second scar, instead of smaller and less conspicuous, is apt to be larger and uglier than the first. In such cases, therefore, it will be best to leave the horny scar alone. It is advisable, though, to keep it always scrupulously clean, particularly in wet and sloppy weather. Applications of external remedies, caustics, etc., will make it worse.

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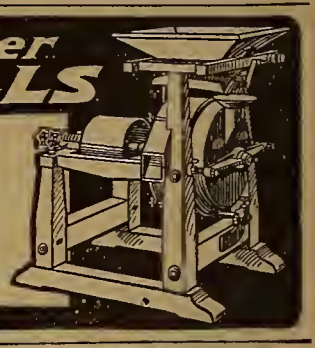

fit the rural resident for making a good profit at custom grinding and to do his home grinding for table meal and stock feed in the best and most economical manner. Thousands have found it so. List of names of users of our mills in your locality, and our "Book on Mills," will be sent you FREE.

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CREAM SEPARATOR GIVEN AWAY FREE. We know the PEOPLES CREAM SEPARATOR is the best in the world. We want all farmers and farmers' wives to convince themselves that our statement is true. We will for a limited time give away ABSOLUTELY FREE for a few hours' work, one of these separators to every one writing for it. Don't forget to send us the name of your nearest freight office with your request for free separator. Write today; its free for the asking. PEOPLES SUPPLY CO., DEPT. 531, KANSAS CITY, MO.

HAS NO EQUAL For Spavins, Ringbone Splints, Curbs, and all forms of Lameness, bunches or bony enlargements.

Magnolia, Md., Jan. 17th, 1900. Dear Sirs:—I have used two bottles of Kendall's Spavin Cure and can say that it has given entire satisfaction; as a spavin cure it has no equal. Yours very respectfully, JAMES F. McQUADE.

As a liniment for family use it has no equal. Price $1; six for $5. Ask your druggist for Kendall's Spavin Cure; also "A Treatise on the Horse," the book free, or address DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

Carborine SURE-HEALING POWDER *Quickly Heals Barb-Wire Cuts, Galls, Sore Shoulders, Ulcers* or ANY RAW SORE. Money back, if it Fails to Heal. *Postpaid 25c box. SPRINGFIELD DRUG CO., Dept. 18, Springfield, Ohio.*

TO FARMERS—Of all the powders, liniments, etc., we have ever used, Carborine heads the list. A cut, sore shoulder or back will heal more quickly with Carborine than with any other remedy, and we have tried them all. Clean and easy to use. You lose no time. Horses work every day.—SUPERIOR DRILL CO., Springfield, Ohio.

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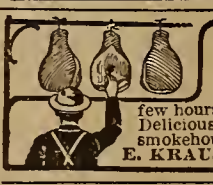

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GOT A DOLLAR? Invest it in our choice FRUIT TREES, shrubs, or vines. Ours grow; are well rooted healthy, true to name. Send trial order. 25c due bill and catalog in German or English free. We pay freight on $10 orders.

25 Grafted Apple Trees for $1
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40 Concord Grape Vines for $1

Fairbury Nurseries, Box P, Fairbury, Neb.

NO HUMBUG—3 Perfect Tools In One. Humane Swine V Stock Marker and Calf Dehorner. Stops swine of all ages from rooting. Makes 48 different ear marks, large or small. No change of blade. Extracts Horns. Testimonials free. Price $1.50, or send $1.00, get it on trial. If it suits, send balance. Pat'd Apr. 23, 1901. FARMER BRIGHTON, FAIRFIELD, IOWA.

DON'T SET HENS the same old way when our new plan beats 14 10 times. 100 Egg Hatcher Costs Only $2. Over 94,000 in use. 1000ds test'ls. 5000 agents wanted for 1902, either sex. Pleasant work. Big profits. Catalog and 10c Egg Formula FREE if you write today. Natural Hen Incubator Co., B 62, Columbus, Neb.

The Ready Built **ELLWOOD STEEL WIRE FENCE** Stays Up

So nicely woven of strong steel wire that the tension is the same all over. Stretch it tight. Contraction amply provided for. Low in price; high in quality. Sold everywhere. If your dealer hasn't it, write to American Steel & Wire Co. Chicago, New York, San Francisco, Denver.

NEW NURSERY OFFERS. We are offering a fine line of vigorous, hardy trees this year, also many new things; York Imperial Apple, Gordon Peach, Climax Plum, Marie Strawberry, Standard Kieffer Pears. Giant Asparagus are but a few of the good things. The line really includes everything for the orchard and garden. Everything selected, strong, hardy. New catalog free. HARRISON'S NURSERIES, Box 28, Berlin, Md.

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TREES and PLANTS THAT GROW and bear fine fruit. We grow that kind. Large stock. Honest dealing. Low prices. We pay freight. Budded Peaches 6c.; Grafted Apples 5c.; Concord Grapes 2c. English or German catalogues free. CARL SONDEREGGER, Prop., Box 32, Beatrice, Neb.

FREE Our handsome Garden Annual and Seed Catalog. Send your address on a postal today, or for a 2c. stamp and name of a neighbor, who is an actual seed buyer, catalog and a packet of the Large German Pansy if sent before March 20th. Address COLE'S SEED STORE, Pella, Iowa. **SEED**

BUY THE BENNETT **STUMP PULLER TILE DITCHER** Handy Farm Wagon & CORN HARVESTER Cat. each free. H. L. Bennett, Westerville, O.

MAKE MONEY pulling stumps, grubs, etc., and clearing land for yourself and others. Hercules Stump Puller is the best. Catalog FREE. Hercules Mfg. Co., Dept. O Centerville, Iowa.

IOWA FARMS $4 PER ACRE CASH BALANCE CROP TIL PAID

THE GRANGE

Conducted by Mrs. Mary E. Lee, New Plymouth, Ohio

Religion, morality and knowledge, being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.—Dr. Manasseh Cutler.

Current Comment

Ohio State Grange The twenty-ninth annual session of the Ohio State Grange, held in the historic old city of Marietta, December 10-12, 1901, was one of the most successful sessions in recent years. The weather was delightful, the city's welcome most cordial, the side excursions well planned and full of interest, and the business sessions were marked by the prompt dispatch of business.

The address of State Master Derthick was scholarly and statesmanlike. He called attention to the fact that the efforts toward building up the order in Ohio were directed to strengthening the weak granges rather than organizing new ones. However, more than twenty granges have been organized. The grange is urged to stand by legislation which it has secured in years past; namely, the game law, and Rawlings' law taxing goods in manufacturers' hands. Attempts will be made to secure the repeal of these laws. Ohio State Grange delegates to the National Grange secured the unanimous adoption of a resolution instructing the legislative committee to use every legitimate means to secure the enactment of a law by Congress that shall be uniform in all the states, and shall prohibit the adulteration of food, drink and drugs with any substance deleterious to health, and providing that each package must be marked plainly with the name and per cent of every ingredient. Should this bill be introduced Ohio congressmen should be urged to support it with vigor. The matter of education was discussed at length, and the value of the grange as an educator, to fill and round out the incomplete education of our district schools, was strongly emphasized. No recommendations were made, as a committee on education, appointed one year ago, would make a report.

Assistant Secretary of Agriculture Brigham was present and was rapturously applauded. He gave several valuable addresses, outlining the work of the Department of Agriculture. He urged the necessity of organization not only as a means of self-preservation to the farmer, but also that he might fight in the ranks of Right, in the battle that was ever being waged between Right and Wrong.

Judge Henry M. Huggins, a frequent contributor to our columns, who always finds eager listeners among Ohio Patrons, also spoke on several questions. The Deputy Masters held a number of interesting and profitable sessions. Ohio State Grange gave one session to this important branch of the order. Several valuable papers were read, and the discussion that followed showed that the Deputies were anxious to render the best service possible. The working Deputies are too poorly paid.

"I haven't sufficient emphasis to express my pleasure at the treatment here," said State Lecturer Strode; and he but voiced the sentiment of visiting Patrons generally. Dr. F. P. Ames was the moving spirit in this magnificent reception. He was ably assisted by willing workers, but to him is due the credit of having the arrangements so perfect and complete that everything moved off with clocklike precision and smoothness. Doctor Ames is of a good old family, and a graduate of Marietta College, and a man of sterling worth who will prove a valuable leader in all that pertains to advanced agriculture.

The Washington County Fifth Degree Team conferred this beautiful and impressive degree in splendid form.

A class of one hundred and twenty-five took the sixth degree. The lady officers spared no pains to make this degree beautiful in the extreme. Those who have witnessed this ceremony many times are unanimous in pronouncing it the most complete success that has ever been achieved by the Ohio State Grange.

Grange Field Meetings Up to the date of this writing the reports from grange field meetings are inspiring. In the majority of cases the attendance has been good and the speakers entertaining and instructive. New members are being added to the grange.

Worthy Master Jones of the National Grange has conducted a vigorous campaign in several states. Enthusiastic crowds greet him. They depart with a broader conception of life, its duties, possibilities and responsibilities. Brother Jones' eloquent appeal for better and more beautiful homes, more social privileges and a higher degree of culture for the farmer's family finds an answer in every heart.

The social features are particularly enjoyed. We are learning that our neighborhood has no set limits. Rare and choice friendships are formed that link us together in closer fraternal relationship. We have a new conception of the words "brother," "sister," when we realize that no matter how far separated by time and space, all have the same hopes and aspirations. All share alike the same desires for a broader, fuller, freer life. What is of more value, we find that the means to this end are within our reach; that we need only make use of the opportunities that are so lavishly bestowed to realize a more beautiful and serene life. May the inspiration, zeal and enthusiasm generated by these meetings, the friendships formed, continue and bring happiness to all.

The Granddaughters of To-morrow

"I never go to Jen Davenport's but I come away angry and humiliated!" exclaimed a pretty young bride.

We had just returned from Mrs. Davenport's, where we had been accorded the most courteous treatment.

"And what is wrong with her?" I asked. "She certainly has a cozy little nest, is a charming hostess, and fits admirably the background of heirlooms."

"That's just it!" exclaimed my friend, crimsoning. "You will think me very foolish, but I would give my Chickering for one of those old silver spoons or that cracked piece of Limoges ware. We could buy and sell Jen ten times over. Fred and I both can trace our lineage back several centuries, while Jen doesn't know who her great-grandfather was. But her grandmother had the taste, possibly the foresight, to perpetuate her memory by securing some dainty china and silver of a by-gone day."

"But your ancestry were prominently identified with the development of the country," I answered. "You could become a D. A. R. with splendid credentials. Two thirds of the states 'point with pride' to the achievements of members of your family. You yourself—"

"Have no heirlooms," retorted Ruth. "Of course, I know how it all came about. When my ancestors left their Eastern home for the Western wilderness they brought no 'household penates' with them. Only the barest necessities of life came. The heirlooms remained with the Eastern cousins. The struggle for existence in the new country was hard," she added, apologetically.

"Hard, but successful," I replied. "Life was a serious matter with these early settlers. Knowing the necessity of an education they made heroic sacrifices that we can scarcely realize to educate their children. The prominent stations the sons and daughters filled prove the wisdom of this. And when that was done, the habit of self-denial for such a purpose was so well fixed that they extended help to other deserving youths. No doubt they often sighed for silver and china and rich mahogany, but mind to them was far above matter."

"Weren't they splendid!" exclaimed Ruth, enthusiastically. "I am proud, proud of them! I suppose I am a bit foolish, but yesterday Mrs. Richardson called on me just after she had been to Mrs. Davenport's. She remarked about her rare and beautiful old china and silver. 'Her people must have had considerable property, as well as a cultivated taste,' she said. 'Some of her pieces were rarely precious.' I changed the subject as gracefully as I could. You know Mrs. Richardson reigns supreme here and is a stickler about blue blood. We are new-comers, and desirous of a good social standing."

"I presume you know the scandal connected with this same rare old china?"

"Oh, yes. The grandmother a servant in Judge Beman's family; mysterious disappearance of silver and china. But I could not, and would not, use that against Jen. She is all right and not responsible for the sins of her grandmother. But mark this," said she, flushing and laughing, "my granddaughters will not have the cause for chagrin that I have. Their grandmother will provide against that evil day."

And noting the determined look back of the flush and the laugh I knew she would keep her word.

While we boast of our democratic ideas yet we do not conceal a creditable family tree in the closet. And we like it large and strong, like the oak that has wintered the storms and blasts of centuries, with its roots ramifying star-chamber sessions and generals' headquarters and university archives, its branches rustling with the musical swish of Oriental silks, and the leaves flinging the aroma of the spices of the East to the breeze. Its trunk must have a large circumference, indicating a rich, strong soil; and the tap-root must reach down into a sparkling well-spring of human thought and action.

"Other things being equal," exclaims the Autocrat, "in most relations of life, I prefer a man of family." And this conviction is shared by nine tenths of the human race.

If you have no family tree, consider this Arbor Day and plant one at once. Let its roots reach deep into heart and brain. Then give to the cooing, laughing babe some outward semblance of the inward growth—a sterling-silver spoon, a choice bit of dainty and fragile china. Would you spend more? Then get a Rookwood vase or a bit of real majolica. Whatsoever you give, no matter how small, let it be genuine. A fond grandmother, a doting auntie will keep fresh her memory and win compliments as to taste and culture by one such rich gift. Choice mementoes are a constant reminder of the life and thought of a cultivated mind. In the days that come the granddaughter will feel a pardonable pride in the dainty and artistic pieces, symbolical alike of the artistic taste of one who is gone and of the art of her day.

The National Grange

The following are the specific objects for which the National Grange will work during the present session of Congress:

PATRONS OF HUSBANDRY,
OFFICE LEGISLATIVE COMMITTEE,
514 F ST., WASHINGTON, D. C.,
September 28, 1901.

TO MEMBERS OF FIFTY-SEVENTH CONGRESS:

The National Grange, Patrons of Husbandry, representing the farmers of the United States, respectfully calls attention to the following matters upon which legislation is desired:

1. Further Extension of Rural Free Mail Delivery.
2. Submit an Amendment to the Constitution Granting the Power to Congress to Regulate and Control all Corporations and Combinations of Capital of a Monopolistic Nature, thus Preventing the Use of their Corporate Power to Restrain Trade or Arbitrarily Fix Prices.
3. Establishment of Postal Savings Banks.
4. A Pure-food Law.
5. Completion of the Nicaragua Canal by the United States.
6. Additional Powers to the Interstate Commerce Commission.
7. Election of United State Senators by Popular Vote.
8. Opposition to the Ship Subsidy Bill.
9. Prohibit the Fraud in Colored Oleomargarine. Respectfully,

AARON JONES,
E. B. NORRIS,
N. J. BACHELDER,
Legislative Committee National Grange.

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We want your trade and give you in this list a chance to secure the greatest bargain you ever saw.

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10-lbs. very best Large Head Rice	.60
10-lbs. Black French Prunes	.59
10-lb. sack best Table Salt	.01
10 1-lb. bars Cudahy's Family Soap	.39
3 2-lb. packages whole wheat Pancake Flour	.30
1-lb. pure Cinnamon (ground)	.39
1 8-oz. Panel Bottle Vanilla Extract	.49
1 8-oz. Panel Bottle Lemon Extract	.49
5-lb. can very best Baking Powder	.95
1-lb. can pure Black Pepper (ground)	.25
½-lb can Pure Cloves (ground)	.19
½-lb. can Pure Allspice (ground	.19
1-lb. best Shredded Cocoanut	.20
4-lbs. Java and Mocha Coffee	.99
2-lbs. Majestic best basket fired Japan Tea	.98
4 bars P. & G. Ivory Soap	.02
10-lbs. best New York Buckwheat	.39
2 cans best Early June Peas	.25
3-lbs. California Pears	.38
2-lbs. Oriental Figs and 2-lbs. Oriental Dates	.35
3 packages Best Corn Starch	.15
1 gallon Table Syrup	.39
3 2-lb. packages best Rolled Oats	.27
3-lbs. best California Raisins	.27
3-lbs. best California Currants	.30
20-lb. box best Soda Crackers	.99
2 cans best Alaska Salmon	.20
4 cans best Domestic Sardines	.19
3-lb. package Ginger Snaps	.29
1 compartment Dinner Pail with tin cup filled with Jelly and Preserves	.14
	$12.28

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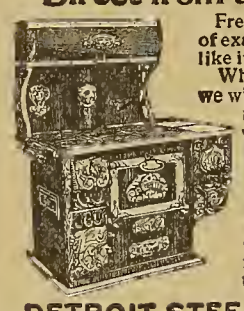

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REFERENCE, FIRST NATIONAL BANK, CHICAGO.

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The greatest labor-saving machine ever used on a farm. Does not mix the water with the milk or require power to operate it. Every farmer makes creamery butter and more of it. It has double the cooling surface of that of any separator made. Ask your grocer for them or write direct to

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It's the Best Root Cutter, for it's the only one which cuts all kinds of roots into fine palatable, non-chokeable food, taking out all dirt, gravel, etc. We make them in seven sizes for band and power. They will help out wonderfully in this season of short feed. Write for free catalogue. We are the largest root cutter makers in the world.

O. E. Thompson & Sons, Ypsilanti, Mich.

A Girl's Love-Letter

BY FRANCIS BENNETT CALLAWAY

A GIRL'S letter should be as pure and sweet as a flower, and as bright as sunshine, for girls were meant to be the flowers and sunshine of the world; but how often do we find the up-to-date girl's letter a mixture of coarse slang, senseless chaffing about boys or of selfish complaints. It is said that our conversation, whether written or spoken, is a portrait of mind and heart. How unlovely are some of these portraits! What unpleasant impressions they leave with us! "You cannot," says Boyesen, "make a comrade of a cackling flirt or a simpering fashion-plate."

The following letter was written by the daughter of a saloonkeeper in the slums of New York, where unspeakable crimes darken human lives and where vice is contagious. Under the influence of her beloved pastor, who daily gives his life to his flock, the girl's thoughts are turned to the light, and as a pure, white lily grows up out of slime and filth, so Minna's pure nature unfolds with exquisite delicacy and beauty. There is not a word of slang in this letter, or one fretful complaint. Intended to be read only by her very dear Marguerita, the girl's thoughts, revealed to us in this love-letter, are as those of an angel:

MY BELOVED FRIEND:—

Last night, as we were walking down "Our Lovers' Lane," we were just like two lovers taken up or wrapped up in each other, and you were perfectly right when you said we were having "A Lovers' Match." Now, dear, why shouldn't we? I have often heard you say that you loved me and believed me, but it felt so good to hear you say so last night. I don't know why, but it did make me feel so good.

I wish that they didn't give so many lessons at school. I know they must tire you so, and then they keep you up nights. Sometimes, when you leave me at night and tell me that you have lessons to study, I really wish that I could do them for you; but knowing that I can't, I ask God to give you strength and wisdom and to help you.

And then, dear, you have to get along at all times, sick or not sick; but that is the way we all have to go on this earth until we go to God, where there will be no pain, no crying nor separation from loved ones. But, dearest, God says he will never leave us nor forsake us. Now, isn't that a glorious promise? Claim it daily, and may God's own real sweet presence be manifested unto you. Sometimes, when the Holy Spirit warms our hearts in prayer, we feel that if we could only worship God all the day our love for him would be so intense that if we should go out into the world at that moment, oh, how much good could be accomplished.

There is one sermon of pastor's that has gone deep into my heart. It is but one sentence, where Christ is weeping over Jerusalem, and saying, "Oh that you had such a heart that it might be well with you." That one sentence tells a great story. It shows God's love for his children. Oh, isn't that passage true where it says that God is more willing to give than to receive? Oh, why can't we give up ourselves entirely to his leading and keeping? It is then I believe that all people will worship the living and true God.

Last Friday's sermon reminded me of a letter I wrote to my pastor last summer. The evening before I had read the fifth chapter of Galatians, and seemed so impressed by its teachings that I sat down and wrote a letter to my pastor. Oh, what resolves and plans I made that night! I really wanted God. The verses I dwelt on were those concerning the fruits of the Spirit. Dearie, tell me, won't you, have you seen any of them in my life? It seems to me that I can't find any.

I am glad that God has made us friends, and one in love and sympathy. Although I have said before, I will say it again, "I love you very, very much." These few words might not seem very much in writing, but some night when we are taking our little walk I will tell it to you again softly. What I have said in this letter may seem to be all about myself, but, dear, I want you to experience God's love as I have at times.

O dear God, I want you for Jesus' sake to keep and bless my very dear Marguerita, teaching her daily about thee and helping her to daily enter thy rest, and may she, O God, put implicit trust and faith in thee. Lead her, that she may lead others to thee, and draw thou around her daily thy golden cords of love. Oh, may she love thee as thou lovest her, and strengthen her in body and soul.

The inclosed pansy is for a thought from me who am as ever

Your loving sister in Christ,

MINNA.

Hand-sewing

Since the sewing-machine has come into such general use many have feared that hand-sewing would soon become a lost art; but in the last year or two there seems to be a revival of hand-sewing not only in the delicate embroideries, hem-stitching, drawn-work and lace-making, but in plain hems, seams and gathers on fine underclothing. It has become quite the fashion for girls to make many dainty articles of clothing in the old-fashioned way, and the needle and thimble are again brought into use. The bride of to-day must have at least a part of her lingerie hand-made, and it is quite the fashion for her most intimate girl friends to each make for her a garment with their own fair hands, and vie with each other in the beauty of their stitches. No ruffling is so pretty as that our mothers used to make with the tiny rolled hem and the gathers in the over-and-over whipped stitch and sewed on by setting a stitch in each gather.

Many mothers are now taking more pains to teach their little girls to sew neatly by hand before they are allowed to use the machine, and in many cities hand-sewing is taught in the public schools. In some schools half a yard of muslin is given to each little girl, and upon this she is taught all the various stitches—running-stitch, back-stitch, plain seam, French seam, fell hem, gather, whip, etc., and, after these can all be done neatly, hemstitch, feather-stitch, button-holes, outline-stitch, etc. Some of the most common embroidery-stitches are also taught on this same piece of muslin before any garment is attempted. Some may think this plan not as encouraging to the girl as when she feels she is making something, but in a class it seems to work all right, as there is the stimulus of rivalry and the desire to do the work so well as to gain promotion to garment-making.

Little girls always like to do hemstitching, and, in fact, it is easier than plain hemming after the threads are drawn. Many make the mistake of drawing too many threads, thus making too wide an open line. In plain hemstitching three threads are enough to draw. Turn the hem accurately, and baste, cutting out the overlap at the corners. Always use fine cotton for hemstitching—No. 100 on heavy linens and No. 150 on linen lawns. After the threads are drawn and the hem firmly basted hold the work as in ordinary hemming, take up a few threads from the drawn line, draw the cotton all the way through, and then take an ordinary hemming-stitch just back of the threads taken up and through the main linen and the hem. Continue these stitches, making them as even as possible, but it is not necessary to count the threads. This is a simple hemstitch, and every one who has tried it prefers it to the knot or cross hemstitch.

No one will deny that the coming of the sewing-machine was a great era in household sewing, and has proved of vast advantage, but women are learning now where to use the machine and where hand-sewing is superior. When bed or table linen is hemmed with a machine, after a time a dark ridge will appear along the hem which no laundress can dislodge. Plain hand hemming or hemstitching holds the edge down flat and leaves no place on which a ridge of dust can settle. When pillow-slips are not made of the tubular muslin the selvages should be over and over stitched, the end sewed a seam on the machine and then over-cast. It should never be felled, as it makes a hard ridge. Finish the open end of pillow-cases with a two-inch plain or hemstitched hem. The old-fashioned way of finishing the bottom of sheets with a very narrow rolled hem and the top with a two-inch hem still prevails. If you hemstitch the pillow-cases, make the top hem of the sheets in the same way.

Hemstitching adds much to the beauty of table-linen, and it can be done so rapidly that if only used as pick-up work much can be accomplished in a short time. The long winter evenings after the holidays is just the time to do fine sewing. It is a good plan in buying table-linen to choose a pattern without much plain surface if buying linen of medium price, but if buying the finest damask choose the opposite, for it is the plain surface that shows the quality of the linen. Small patterns are to be preferred in table-cloths of medium size. If table-cloths and napkins are not hemstitched they should be finished with a tiny rolled hem, the dainty stitches of which are almost invisible.

The old custom of a linen-chest for each daughter is being revived in some families, and is an incentive to fine sewing. If a girl commences as soon as she has learned to sew well to put dainty pieces of her handiwork in her linen-chest as time and material are given her, by the time she needs these things for her marriage outfit she will have a goodly supply on hand and not have everything to buy and make at this time. Initials of different sizes as one's taste dictates are embroidered on both table and bed linen. MAIDA McL.

Mistakes of a Mother

I wonder if any other mother made so many mistakes with her first child as I did? Did any other love her baby so dearly and yet manage it so harshly?

The first mistake was made when she was only a few weeks old. I thought she must be trained. Other mothers had told me that there was a great deal in beginning right; that there was no use in taking a baby up every time it cried. In my ignorance I took no note of the fact that these mothers were women of the lymphatic temperament and that their babies had not inherited nerves. So I let my nervous, high-strung baby scream by the hour, until she developed a passionate obstancy which gave me no end of trouble later on.

After she began to creep and toddle around I always met her spirit of inquiry into pot-plants, ink-bottles and the like by a spanking, administered from one to three times a day. A scolding often accompanied the spankings. By the time she was two years old she was a tempest, a cyclone. In her fits of fury she would throw herself against a hot stove if it came in her way, pour forth ear-splitting screams, kick, scratch and bite. Being dull of comprehension I did not at first see that this behavior was merely the result of my management. My school studies, theory and practice, psychologies, etc., had not even touched on my theories concerning babies, nor on the practices of such a mite of humanity as this.

Then, I thought if I gave her an order I must make her obey if it took all summer. This was perhaps the worst mistake of all. She was just as stubborn as her mother, and almost as unreasonable. Only the utmost severity could force obedience from the plucky little maiden, and I always had to own in the end that the discipline had cost more than it was worth. It always hurt my feelings to be so hard with her, for when not in a temper she was a sweet, affectionate child, and I should really have preferred to humor her. But I kept steadily on, fortifying myself with the thought that if she grew up a spoiled child it should not be my fault.

I sometimes used to ask her if she had committed depredations which I discovered. It was a wonder she did not say no. She would look me squarely in the eyes, and say, without a trace of fear, "Yes, I did it!" which confession would be rewarded with the usual punishment.

It was not until she was three years old that she began to prevaricate. That brought me to my senses. I began to see that I was spoiling a noble character by harshness. I took her in my arms, and talked to her tenderly of the wrong of untruth. She looked very sad, and promised never to tell what "wasn't true." And she never has. Now if she disobeys she forfeits her bedtime story. It usually needs but a reminder to bring her to submission. If she is fretful and exacting, two stories—one of a patient, the other of an impatient little girl—will lead her to commend and imitate the patient one. All her moral lessons are drawn from stories illustrating the virtues. The vices I have learned to be silent upon. I am trying to undo by gentle measures the mischief I wrought in her babyhood. In the hope that these mistakes may benefit some other mother as ignorant as I was I here present them for publication. E. M. D.

Our Coffee

A nation of tea and coffee drinkers we assuredly are. A nation of coffee and tea drinkers we seem apt to remain despite the fact that we are daily warned that coffee is detrimental and tea "dreadful."

Failing to have found it so, and, upon the other hand, encouraged by others to believe that our favorite table-drinks are stimulating and medicinal, we cling to them and pass by the "postums" and other concoctions that are advertised as harmless and helpful and to be just as good as our beloved cup of coffee.

Coffee is claimed by those in authority to have a powerful influence on the nervous system, and that for brain-workers it cannot be overestimated. It has been called the mental beverage. Entirely unlike alcohol in its stimulative properities, it produces a gentle, healthful exhilaration. It has been the immoderate use of coffee that has given rise in times past to the impression that it is harmful to the human system. The immoderate use of any other article of human consumption would likewise prove detrimental.

The habitual coffee-drinker who undertakes to nearly sustain life by its use must eventually doubtless find the system in impaired condition. Very strong coffee three times a day is out of all reason. It is not unusual, however, to find families where it is used to excess in just this manner. People of strong constitution, whose lives are lived out of doors and at hard labor, apparently awaken to no discomfort because of it. One of sedentary habits, however, finds it not practicable to indulge in coffee too often or too strong. The morning cup good and strong and well diluted with reasonably rich cream stimulates to the day of labor before one, and presents a nectar fit for the gods.

The coffee crop is said to be very large this year, yet we see no diminution in the prices asked by our retail merchants at least. In Holland coffee is worth about six dollars for one hundred and thirty-five pounds, while by the time that article reaches us the same quantity would take from our pockets at popular prices the sum of forty-seven dollars, or maybe more. We frequently pay forty cents a pound, and the computation was figured out at a lower rate than forty cents.

Much of our coffee comes from old Mexico and from the tropics. Coffee-plantations are numerous in the Tuxpan valleys of Mexico, where the people are likewise engaged in rearing tropical fruits, rubber and vanilla. In this part of the world the cultivation of the soil is crude even to the present day, as compared with the high standard of cultivation that the United States has grown rapidly to understand and to practice. But for the rare climate and soil where our coffee is grown we should doubtless pay a greater price than we do for this article that we so strenuously are clinging to in spite of the fact that substitutes are offered of a less money value, and said to be of a greater health value likewise.

The coffee-tree is a shrub-like tree—none reaching to a greater height than seven feet. It is "evergreen," and a coffee-plantation is a beautiful sight. The leaf of the tree is smooth and shiny and oblong, being in length from five to six inches, and about two and one half inches wide. The tree when in bloom is beautiful beyond compare. Its clusters of bloom are snow-white. The berries when ripe are red, and resemble

a cherry very much. It is a fleshy-appearing fruit, and requires drying to obtain the two berries which each fruit-form contains. These grains are the seed of the coffee-tree, and it is the seed we use for coffee. Each seed is incased with a thin, parchment-like material that in the roasting process slips from the seed, and this we blow from the pan of parched coffee when it is ready to be put away in cans.

The people of Norway are known as superb makers of coffee in its perfectness. Their coffee is roasted fresh every morning. They have an invention of their own for coffee-roasting that is as much a part of the culinary outfit as is the coffee-pot and the coffee-grinder. It is a shovel-shaped dish of metal, with a tight cover, into which goes the green-coffee product, and from which emerges the coffee-berries done to a turn. When the coffee has well begun to roast a bit of butter is added, and this enters into the berry as it completes the process of browning. The flavor thus given is very like that given to the cupful of coffee into which bread and butter has been dipped, though it is more delicate, subtle and indescribable.

We learn that the French also use butter in parching or browning coffee. Their rule closely followed is a piece of butter the size of a walnut and one dessert-spoonful of granulated or powdered sugar to three pounds of green coffee.

While eggs make coffee clear, they are sheer waste in more ways than one when connected with coffee-making. Especially is this so if boiling water is used to start coffee instead of cold water. The old-time way of clearing coffee was to mix a part or whole egg thoroughly with the ground coffee, pour on boiling water, and boil for a few minutes. The egg was cooked as soon as touched by the hot water, and formed a glazing over each particle of coffee it came in contact with. Much strength is thus lost, and it becomes expensive. Nearly twice the amount of dry coffee is required to make the cupful of coffee when eggs are thus used to settle it. The best and purest coffee is not "settled" except by letting it stand a few moments to settle. When eggs are high-priced there is a second extravagance. In two ways, then, many dimes, and eventually dollars, are to be saved and a better article in coffee secured. We, too, may be famous as cooks, as well as our French sisters of whom we hear so much. It is the painstaking and nicety in little things, and the discovery and bringing out of flavors, that has made them so famous.

NEDELLA HAMPTON.

My Experience

With an abiding faith in the ability of the average American woman, having been placed upon my own resources, through the vicissitudes of life, with a dismal future staring me in the face, but having through good fortune emerged from the Stygian mist that enshrouded me, I would like to say a word or two to other young women who may be struggling for a livelihood as to a good method for relieving themselves of the bondage which apparently surrounds them, striking from them the imaginary shackles with which they are bound, and stepping out into the broad sunlight of independence and prosperity.

The thought has often occurred to me that there would be much less agitation of methods for ameliorating the condition of girls and young women who are left to their own resources at an early age, if the said young women were more self-reliant and exercised for themselves at least a portion of the energy others are expected to exercise for them.

This idea has been strongly impressed upon my mind by reviewing the present (apparently chosen) occupation of a number of my school-girl friends. I can truthfully say that with the exception of myself each one is dependent upon some other for the means of securing a livelihood. Here in this city are numerous institutions of learning of various kinds, and as a consequence many of our young people take to education for a living—a very laudable aspiration—but unfortunately the supply seems greater than the demand.

One day I began to think—there was nothing particularly strange about that—and decided I would not travel in the same rut. I looked around for something to my liking, being too independent to do as the other girls were doing, and decided to establish a business of my own that would be both pleasant and profitable. But what should it be? The idea came to me that people will always eat chickens, so the raising of them seemed the very thing. For them there will always be a ready market at remunerative prices.

The result was that I bought all the hens I could find for sale, and started a poultry-yard for profit. I succeeded fairly well, but the profits were not what they should have been, as the best of the hens' lives were spent in hatching chickens and raising them, and there was generally a dearth of eggs, the chickens were covered with mites, and the hens wandered so much that many of the chicks were lost or destroyed.

The next year I changed my tactics and decided to hatch chickens by machinery, the product of which I found to be more healthful and cleanly, and after much inquiry bought an incubator and brooder and went to work with a zest. The first effort was somewhat disappointing, as I had not been sufficiently careful in observing the instructions. By the time the second hatch came, however, I had learned how to operate it to the best advantage, and succeeded admirably. By watching all the points carefully I came out at the end of the season a little over two hundred dollars ahead of all expenses. But I had learned a lesson more valuable than the number of dollars I had received, and determined to profit by it.

The past season has been a revelation to me. Early in the year I bought two incubators and brooders, one of which I used for chickens for the market and the other for raising blooded stock, and so well did I succeed that when I balanced the books November 1, 1901, I found a credit to my account in the bank of nearly five hundred dollars, with my machinery and a variety of chickens all my own, and my living expenses paid for the year.

I now contemplate enlarging my sphere of operations, and am inclined to add to my enterprise the raising of Pekin ducks, Toulouse geese and Bronze turkeys, although some of my friends are trying to dissuade me from so doing, on account of the increased cost. But if the incubator I am using does as well with turkeys, ducks and geese as it has with chickens I can see no reason why I should not more than double my income.

Girls, do as I have done; strike out for yourselves, decide upon some line of business that will make you independent, and for goodness' sake don't always be a burden on some one else. Mind, I don't say go out in the chicken business as I have done, but go into something whereby you can maintain your independence, acquire at least a comfortable living, and not be dependent upon the whims and caprices of those who are supposed to furnish you at least a comfortable living. Stand straight up and be independent.

MRS. LOUIE E. FLETCHER.

Our Country Club

"Country Club" signifies to some a place where city folk may go for country sport, but our Country Club is a club of country women. We found that we were sadly neglecting all social duties, the distances between houses making calling in the usual way almost an impossibility. As a neighboring gentleman remarked, "We attend each other's funerals, but have no time for other social functions."

However, when Mrs. Durkee invited us to a thimble party, most of us managed to attend, and there it was our Country Club originated. We meet from house to house every two weeks, in the alphabetical order of our names. Thus there is no confusion as to where the next meeting will be held, no rejection of invitations and no lack of a place to meet.

Refreshments are served at every meeting, the woman at whose house the meeting is held furnishing only the drinkables. Half the club each time furnishes the rest of the supper, and alternate, so that each woman prepares something but once a month. There is a previous arrangement as to what each shall bring, thus making a good variety and no duplicates.

Most of the time at the meetings is spent in conversation and sewing either at fancy work or something more useful. Some time has been given to making garments for distribution among the poor. At nearly every meeting some article selected from a current magazine is read aloud. This gives us a basis for discussion, and obviates the tendency to gossip which is sometimes noticed. Twice a year the gentlemen of the families are invited to tea, and all remain for an evening's pleasure.

VELMA V. BEEBE.

For the Ladies' Aid Society

At the wonderful carnival held in Denver the first week in October almost everything was on exhibition; nevertheless one woman (and "they say" she was an old maid) thought they ought to have had a baby show. We wish they had, for of course our baby would have taken the prize. But there is a very pretty fair that can be held; and no babies need to be on the program at all. They can be at home, tucked snugly in their little beds (we do not say cribs any more), and their mamas can be tucking a snug little sum of money in the empty treasury of their society.

You all remember the following lines:

"Monday's child is born to health;
Tuesday's child is born to wealth;
Wednesday's child is fair of face;
Thursday's child is full of grace;
Friday's child is loving and giving;
Saturday's child must work for its living
But the child that is born on the Sabbath day
Is lucky and bonny and good and gay."

Therefore, have seven tables decorated with different colors and in different styles, and have on them the different articles that will "fit" the lines of the rime, the said articles to be sold.

The key-note of Monday's table shall be "health," which will enable it to have such articles as sponges, soft towels, powders, etc.; that of Tuesday's table shall be "wealth," with articles such as baby-pins, dress-studs, silver rattles, articles of ornament and value, etc.; of Wednesday's table "beauty," with articles such as looking-glasses, beautiful baby-pictures, etc.; of Thursday's table "grace," with such articles as baptismal robes and christening gifts; of Friday's table "gifts," with presents of all kinds for the baby; of Saturday's table "work," with articles on it all hand-made, while the key-note of Sunday's table shall be "good," with such articles as may be delightful and appropriate.

ELLA BARTLETT SIMMONS.

School Lunches

Most grown-ups do not fully understand how the average child delights in dainty and pretty arrangements of food and the table. While I am in hearty sympathy with the movement for decorating school-room walls with beautiful pictures, and so trying to educate the esthetic sense of the child, I believe we are beginning at the wrong end if we neglect at the same time the opportunity to train this esthetic sense along the line of commonplace, every-day affairs.

Children like to follow the fashion. So one child who habitually carries a lunch put up in a dainty way, and uses a pretty lunch-cloth, which any girl can make, presents an ideal which is attainable and may more effectually cultivate the esthetic sense than a beautiful reproduction of a great picture.

In matters esthetic we must rise on stepping-stones to higher things. I know of a home where the mother is always dreaming of higher ideals. There are beautiful pictures, the best literature is always accessible to the children, yet they suffer for lack of attention to the esthetics of the commonplace details of the home. The mother does not realize how she is hurting the children, because she does not pay heed to the every-day, homely affairs. Once, while stopping with them, I happened to be sitting in the room adjoining the dining-room when the boys came in. That day everything was fresh and dainty, and sweet-peas and ferns were on the table. The boys stopped a moment, and then began to prance around the table, clapping their hands in delight, and saying, "A pretty table again to-day!" "A pretty table again today!" over and over.

Granted the lunches are wholesome and sufficiently nourishing there is yet the great difficulty in getting the children to give up a sufficient portion of the precious noon hour to properly eat them. A pride and interest in the arrangement of their noon spreads would, I am sure, help in this matter.

SUSAN F. HOWE.

As We Grow Old

As we grow old— as all must do—
And life takes on a sweeter hue,
Things long forgotten come to cheer
The burden of each passing year,
And, as they one by one unfold,
Give recompense for growing old.

Our happy childhood days of yore
Unlock themselves from memory's store,
And once again we know the joys
We had when little girls or boys,
Without the after-sorrows rolled,
But put away when we grow old.

Again as merry tots we play
And in the daisy meadows stray,
And bake our mud pies in the sun,
And home from school delighted run;
Again the fairy tales are told—
We all grow young when we grow old.

Kneeling before our cribs we see
Ourselves in child's simplicity
Lisping our "Now I lay me" while
Dear mother, with her loving smile,
Bestows her good-night kiss to hold
More sacred still when we grow old.

Again we're in our childhood's home,
Without a wish to ever roam;
The dear old pictures and the clock,
The chair in which we loved to rock
While mother held us, we behold
With eager eyes when we grow old.

Once more we hear the birds that sung
Around our door when we were young,
And see the garden, yes, and smell
Its flowers. At the dear old well
We quaff its crystal water cold
With added thirst when we grow old.

Once more up in our high-chair seat
We feast on mush and milk so sweet,
And taste the cookies mother made.
Again, by her dear hands arrayed,
We march to Sunday-school inscrolled
Upon our hearts when we grow old.

As we grow old—as all must do—
Our childhood pleasures we review,
And in those happy days we seem
To live again all in a dream;
But 'tis a dream most sweet to hold—
When we grow young by growing old.

—H. C. Dodge, in Chicago Daily Sun.

Good to Eat

Not only good, but exceedingly wholesome, is whole-wheat bread. In fact, so popular has it become that no dinner is considered altogether complete without it. It is not hard to make if one has a little perseverance and follows directions.

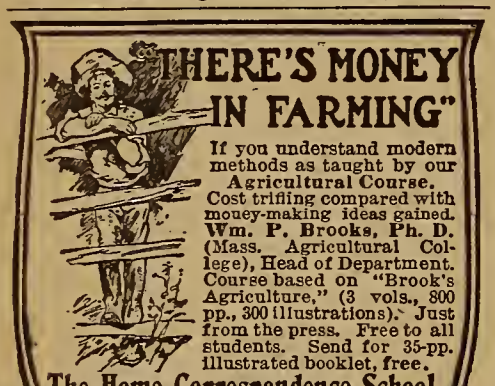
First dissolve a cake of good, compressed yeast in one half pint of warm water; stir this when thoroughly dissolved into the following mixture, when it has become lukewarm—two cupfuls of boiling water stirred into one cupful of milk (one and one half or two cupfuls will not be too much). When the dissolved yeast-cake has been added to the milk and water stir in one tablespoonful of salt and two tablespoonfuls of sugar. Stir in enough whole-wheat flour to make a stiff batter, and beat fifteen minutes. When the beating is finished add more flour, making a stiffer mass—one that can be kneaded. Turn this soft dough on a bread-board, and knead for another fifteen minutes. Put in a greased bread-pan, cover lightly and allow it to rise for three hours. Then knead again, a very few minutes, taking care not to have to add more flour at this time. Mold into loaves, set them in a warm place for an hour or more, then bake forty-five minutes in a steady oven. When taken from the oven do not cover, but place where the air can circulate around the loaves; this will cause the crust to be crisp and good, especially if a little butter, with a dusting of sugar, has been rubbed over the crust after the bread has been molded into loaves.

ELLA BARTLETT SIMMONS.

ADVISING THE YOUNG MAN

This is usually the most difficult problem to parents, ministers, professional men and others to whom young men come for advice. Each and every one has this question to solve from time to time, and is often at a loss what to do. It is a rule that "he who helps another to help himself, helps him best." We are in a position to answer this problem in this way. We would be pleased to correspond with parents and others and acquaint them with our plan to help a young man to help himself. Through the generosity of the founders of the school, and several prominent manufacturers, the Trustees are able to offer each year a few Free Scholarships in our Engineering courses to deserving, energetic and intelligent young men.

The Scholarships for 1902 are now available, and applications will be considered from the readers of the FARM AND FIRESIDE. The course of study offers thorough instruction at home in Mechanical, Electrical, Stationary, Locomotive, Marine and Textile Engineering, as well as Heating, Ventilation, Plumbing and Mechanical Drawing under instructors who are graduates of the great technical schools. Much of the instruction is under regular teachers in the technical schools for which Boston is famous. Write to the registrar of the American School of Correspondence, Boston, Mass., for full information, large handbook describing courses, methods, etc.



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Novel Baby-jumpers

AMUSEMENT that will keep the baby thoroughly contented for hours at a time, and at the same time prove helpful in his physical development, is a blessing to the busy mother who must combine the duties of nurse and housekeeper. For keeping him off the cold floor and out of harm's way while in the open air in summer, nothing is more satisfactory in this respect than a "baby-jumper."

Artistic and costly affairs in the form of baskets and chairs have of late years been manufactured for these jumping exercises, yet the economical mother need not despair of filling this want at very slight expense. A description of an old-time jumper, also of a modern improvement, was recently given by one of the mothers of the "circle," who claims that there have been baby-jumpers of some sort in her family since her grandmother's time and they have been the most satisfactory of amusements.

The first jumper described was one of the ingenious old-time affairs. It was made after a plan of grandmother's. When baby's father was an infant his parents lived in a little cottage the walls of which were not of plaster, but plain whitewashed boards, and the little lean-to kitchen at the side of the house had plain rafters and shakes for a ceiling.

His mother made a little harness for him in this way: Out of some stout cloth she made a sleeveless jacket which buttoned around his body, and a piece was made to come between his legs and fasten to the jacket at the back. He was thus in a sort of "saddle."

His father took a long, slender pole and fastened it securely into one of the rafters of the ceiling, leaving one end loose. By some straps sewed tightly to the shoulders of baby's jacket he was suspended to the loose end of the pole, so that his toes touched the floor, the pole acting as a spring when jumping.

Taking this as a guide, sister made one for little Bessie when she was less than four years old, only she improved on grandmother's method by having a stout spring about four inches long—I believe the baby's father had it made to order at a cost of fifty cents—hung in the center of the doorway. To this she fastened a stout rope, which was tied to each end of a piece of broom-stick, and the baby's jacket was also tied to the broom-stick, or rather suspended from it.

Could the sisters only see how much comfort baby takes in her jumper they would all have one immediately. Wee Bessie sits in hers for hours at a time, and we often find her there asleep, with her head hanging forward. We then slip the straps off the ends of the stick, and, leaving her jacket on her, put her to bed without awakening her. We often say that the "jumper is worth more than two or three nurse-girls." I am sure, too, that the jumping is good exercise for developing baby's back and limbs, and it is certainly a great help to baby's mother.

It is also amusing to see Bessie in her jumper. She laughs and crows and seems to enjoy it so much, and she looks so comical with her head sticking out of the neck of her jacket, like a person in the old-fashioned "stocks," where they used to put people to punish them.

One day the Chinese fruit-man came to the door, and on seeing baby in her jumper he stopped in amazement, then put his hands on his hips and laughed and laughed, saying, "Heap fine boy! Heap fine boy!"

Although these home-made jumpers may seem rather crude in description they prove entirely satisfactory in use. The idea, too, may be improved and enlarged upon by the experiments of the average mother, both in the style and the fit of the saddle-like jacket and in the springing qualities of the jumper. Some may find it more desirable to use a stout, light basket arrangement, in which baby may be firmly placed, instead of the jacket.

It may be well, in fact, before deciding upon the plan of construction, to examine some of the patent jumpers offered for sale, in order to decide upon the best idea for arranging the home-made affair. P. W. HUMPHREYS.

After Baby Comes

THE DISAPPOINTMENTS OF A WEAK MOTHER

After the baby's coming the weak mother often has her first great disappointment in not being able to nurse her child. Perhaps she is not strong enough to sustain more than her own life during the days of slow convalescence. Perhaps there is a lack of the secretions which make the baby's food. In any case she feels robbed of half the joy of her maternity because she cannot nurse her child. And she envies the healthy woman who cares for it and who permits the mother to occasionally see and caress her own baby. If women would consider the matter they could hardly expect to be strong after the baby's coming if they were weak before. The woman who suffers during the prenatal period—who is nervous and sleepless and without appetite, is exhausting her vitality before the hour

of her trial, and when that time comes her very weakness increases her sufferings and prolongs them. It is no wonder, if, after the baby is born, the mother has no strength to nurse it. The one great necessity for happy motherhood is good health.

THE SECRET OF HEALTHY MOTHERHOOD

lies largely in the proper preparation for the great physical strain and drain which women undergo at such a time. A proper preparation for maternity will keep the nerves tranquil and the temper even; it will encourage the appetite and give restful sleep. It will enable the mother to actively engage in her household duties until the time of the baby's advent, and give her strength to give her child.

Because it does all this and more women have named Dr. Pierce's Favorite Prescription "A God-send to mothers."

"I take this opportunity of expressing my everlasting gratitude to you for the wonderful benefits I have received from the use of Dr. Pierce's Favorite Prescription and 'Golden Medical Discovery,'" writes Mrs. E. H. Newton, of Vanburen, Aroostook County, Maine. "My baby was born in May, 1896, and for weeks after I was delirious. My friends did not know whether I would live or die. The doctor in attendance did not give much encouragement, and said that if I did get well I would never live through another such period. When I consulted you in April, 1899, I was in poor health; had been sick all winter, and to add to my trouble, was on the road to what the doctor said would end my days. I was almost discouraged; did not expect any help, but thought the end was only a matter of time, and—oh, my two poor, little, motherless children!

"It was in this condition that I began the use of your valuable medicine. On receipt of your letter of April 6th, my husband purchased six bottles and I used it as you directed. When you wrote me words of encouragement on April 27th I had received no benefit from the medicine, but determined as a last resort to give it a fair trial. I am now taking the thirteenth and last bottle. I have a lovely baby girl three weeks old that weighed 11½ pounds at birth. My baby and I are enjoying perfect health, thanks to your wonderful medicines, to which I believe I owe my life. I cannot find words to express my gratitude to you, and I hope you may long be spared to perform the good work in which you are now engaged."

MOTHERS PONDER THIS!

It is not you only who suffer when you are weak during the term of maternity, but your child must suffer also. It can have only what strength you can give. Your nervousness, fretfulness and fearfulness will leave a life-long impress upon your child, and while you in a few months will recover from the effects of the trial you have undergone, the baby's whole life will reflect the influence of those months of maternal misery.

If you can be a strong, healthy mother by any means, you owe it to your child to use those means at any cost. It is a matter of record that thousands of women to whom maternity was a menace and a misery have been made healthy, happy mothers by the use of Dr. Pierce's Favorite Prescription, which gives abundant strength and makes the baby's advent practically painless.

"I cannot say too much for Dr. Pierce's Favorite Prescription," writes Mrs. S. E. Rose, of Big Otter, Clay County, West Va. "I feel it my duty to say to all women who are suffering from female troubles that it is the best medicine on earth that they can use. I cannot praise it too highly for the good it has done me.

I am the mother of five children, and have been as high as eight days in the doctor's hands, and never less than two days at any time until the last. Then I had used two bottles of Dr. Pierce's Favorite Prescription and was only two hours in the hands of the doctor."

REALLY WONDERFUL RESULTS

Read the letter of Mrs. Rose carefully and you will realize why she cannot praise "Favorite Prescription" too highly. The difference between one hundred and ninety-two hours suffering reduced to two hours by the use of "Favorite Prescription" explains her gratitude, but cannot express it. It takes a woman and a mother to understand all that can be possible in one hundred and ninety-two hours of suffering at maternity.

Dr. Pierce's Favorite Prescription not only gives the mother strength in the period of waiting, but it cures or prevents nausea, and makes the baby's advent practically painless. It is the best tonic and nervine for nursing mothers. It promotes the secretion of an abundance of nourishment for the child while giving strength to the mother. All alcoholic and stimulating medicines are particularly dangerous to nursing mothers, or in the period of convalescence which follows the baby's birth. "Favorite Prescription" contains no alcohol, and is entirely free from opium, cocaine and all other narcotics. It is a real nerve-feeding, body-building medicine.

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"Better one spar of Memory,
One broken plank of the past,
That our human heart may cling to
Though hopeless of shore at last.

"Immortal? I feel it, I know it,
Who doubts it of such as she?
But that is the pang's very secret,
Immortal away from me.

"Console if you will, I can bear it,
'Tis a well-meant aims of breath,
But not all the preaching since Adam
Has made death other than death."
—Lowell.

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PRESIDENT, Box 1421, Philadelphia, Pa.

Strive, Wait and Pray

Strive; yet I do not promise
The prize you dream of to-day
Will not fade when you think to grasp it,
And melt in your hand away;
But another and holier treasure,
You would now perchance disdain,
Will come when your toil is over,
And pay you for all your pain.

Wait; yet I do not tell you
The hour you long for now
Will not come with its radiance vanished,
And a shadow upon its brow;
Yet far through the misty future,
With a crown of starry light,
An hour of joy you know not
Is winging her silent flight.

Pray; though the gift you ask for
May never comfort your fears,
May never repay your pleading,
Yet pray, and with hopeful tears.
An answer, not that you long for,
But diviner, will come one day;
Your eyes are too dim to see it,
Yet strive, and wait, and pray.

—Adelalde A. Proctor.

The Expedition to Ur

A PROPOSED archaeological expedition to Ur, the native city of Abraham, on the Euphrates, which expedition was to go out under Doctor Palmer, of the Smithsonian Institution, is delayed for lack of a permit, or "firman," from the Turkish sultan to carry on the work of excavating for "finds." No effort of the American minister at Constantinople or of Dr. E. J. Banks, who is assisting in the negotiations, bas availed. It is thought by some of the scientists at Washington either that the sultan is guarding the riches of the ancient ruins or is awaiting to have agents investigate the conditions of the land, whether occupied and agreeable to the inhabitants and so on, before granting such a privilege to American science. It is said that nothing can be done but await the pleasure of the sultan, who is either careless or over-covetous of the buried riches of the ruins.

So far only a few relics have been recovered from the ruins, including some bricks rich in legends written by the various viceroys who governed the city. This leads to the conclusion that the terraced temples of Ur, going back to the earliest date of Chaldean history, are adorned with enameled bricks which show a high degree of primitive art, and one which the potters of the last few generations have striven in vain to reproduce.

They were first colored, then glazed, and finally baked in the fire. Remnants of interiors show them to be highly ornamented in colored painting, while the exteriors are of burnt and unburnt brick, supported upon buttresses. Stone was scarce and used only in sculpture and carving.—The Morning Star.

Lincoln's Idea of Selfishness

Mr. Lincoln once remarked to a fellow-passenger on the old-time mud-wagon coach on the corduroy road which antedated railroads that all men were prompted by selfishness in doing good or evil. His fellow-passenger was antagonizing his position when they were passing over a corduroy bridge that spanned a slough. As they crossed this bridge and the mud-wagon was sbaking like a Sucker with chills they espied an old razor-back sow on the bank of the slough making a terrible noise because her pigs had got into the slough and were unable to get out, and were in danger of drowning.

As the old coach began to climb the hillside Mr. Lincoln called out, "Driver, can't you stop just a moment?"

The driver replied, "If the other fellow don't object."

The other fellow—who was no less a personage than at that time "Colonel" E. D. Baker, the gallant general wbo gave his life in defense of Old Glory at Ball's Bluff—did not "object," when Mr. Lincoln jumped off, ran back to the slough and began to lift the little pigs out of the mud and water, and place them on the bank.

When he returned Colonel Baker remarked, "Now, Abe, where does selfishness come in on this little episode?"

"Why, bless your soul, Ed, that was the very essence of selfishness. I would have had no peace of mind all day had I gone on and left that suffering old sow worrying over those pigs. I did it to get peace of mind, don't you see?"—Springfield (Ill.) Monitor.

The Root of All Evil

A remark fraught with wisdom was uttered under tragic circumstances by a New York physician a short time ago. He was called to the bedside of a young man of a fine family who had just ended his life by putting a bullet through his heart. The doctor was a family physiciau and had known the youth for years. He shook his head sadly as be raised the lifeless hand and let it drop.

"He was a boy of brains," he said, "but he had too much money ever to amount to anything."

That was the root of the evil in this case, as it is in so many others. The young man had a settled income. It turned his mind from work. He led the life of an idler. He had no ambition, no pride. He dawdled here and there, he became a lounger about theaters, he picked up acquaintances who were a damage to him. And finally, when he tired of it all, he resorted to the revolver and brought the worthless game to an end.

"He had too much money ever to amount to anything," said the family doctor, and it is a remark rich in moral warning.—Cleveland Plain Dealer.

The Boy's Playtime

I wish only to say that the joy of sport lies in the work it involves—tbe amount of pbysical and mental heat it releases—the skill, courage and endurance called out. The youth who wound his winter socks into a baseball, and shaped out his bow and arrows, had, I am sure, all the fun there was to be had in the field of sports. It is so in everything. Let your boy cut his trout-pole in the woods, hunt his grasshopper and fly in the grass-lands, and he will not be far bebind the trained fisherman, who has basket, rod, reel and the latest fly, in the aptness with which he will tickle the nose of the fastidious trout. Buy him rod and reel if you like, but if you cannot, do not waste any pity on him for his deprivation. Far from being an object of commiseration, he is more likely to smile as he sees the handsomely equipped fisherman pass unheeding over the fallen trunk under which lurks the two-pouud trout destined to his own basket.

So also in boating. Let your boy build himself up in the arts as far as he may—mast-scraping, sail-mending, painting. Let him search the intricacies of the hold for the hidden leak, and only call in the artisan when the ribs are "nail-sick."—Harper's Bazar.

Give to Help Others

The best way to help one's self is to help others. This is not the view worldly men take. They imagine that the more they do for others the less they bave for themselves. They get all they can, give as little as possible, and keep all they can. They do not give to help the poor, to build great institutions for educational and charitable uses, because they believe that giving will diminish their store and weaken themselves. When they give at all they try to do so in such a way that all men will know it in order to make it work for their own good, after all. Tbey give for themselves and not for others.—Dr. Buckley.

DOES NOT DISAPPOINT

The New Discovery for Catarrh Seems to Possess Remarkable Merit

A new catarrh cure has recently appeared which, so far as tested, has been remarkably successful in curing all forms of catarrh, whether

in the head, throat, bronchial tubes, or in stomach and liver.

The remedy is in tablet form, pleasant and convenient to take, and no special secrecy is maintained as to what it contains, the tablet being a scientific combination of Bloodroot, Red-gum and similar valuable and harmless antiseptics.

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Whether the catarrh is located in the nose, throat, bronchial tubes or stomach, the tablets seem to act with equal success, removing the stuffy feeling in head and nose, clearing the mucous membrane of throat and trachea from catarrhal secretions, which cause the tickling, coughing, hawking and gagging so annoying to every catarrh sufferer.

Nasal catarrh generally leads to ulceration, in some cases to such an extent as to destroy the nose entirely, and in many old cases of catarrh the bones of the head become diseased. Nasal catarrh gradually extends to the throat and bronchial tubes and very often to the stomach, causing that very obstinate trouble, catarrh of the stomach.

Catarrh is a systemic poison, inherent in the blood, and local washes, douches, salves, inhalers and sprays can have no effect on the real cause of the disease. An internal remedy which acts upon the blood is the only rational treatment, and Stuart's Catarrh Tablets is the safest of all internal remedies, as well as the most convenient and satisfactory from a medical standpoint.

Dr. Eaton recently stated that he had successfully used Stuart's Catarrh Tablets in old chronic cases, even where ulceration had extended so far as to destroy the septum of the nose. He says, "I am pleasantly surprised almost every day by the excellent results from Stuart's Catarrh Tablets. It is remarkable how effectually they remove the excessive secretion and bring about a healthy condition of the mucous membranes of the nose, throat and stomach."

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Frederika's Shipwreck

BY FRANCES BENNETT CALLAWAY

THE calm, gray morning was just lifting over the sea, and John had his writing spread serenely around him in the square, sheltered veranda we grace by the name of tea-room, when things began to happen.

"John," and I swung open the upper half of our front door with perceptible emphasis, "that perspective stove won't bake!"

"Well, Sonsy?" and John continued calmly with his writing.

It is John's habit as a newspaper man to begin long, tiresome editorials just when I want to talk with him.

"Well, Sonsy," repeated John, without looking up, "what of it?"

"We won't have any breakfast, that's all there is of it. Ellen can't make the biscuit."

"Oh, never mind—broiled fish and baked potatoes make a capital breakfast, with this sea air to sharpen one's appetite."

"But the stove won't bake potatoes. It won't bake or broil anything. You might have known, John, a rusty little stove like that, all broad in front and narrow behind, wouldn't cook anything."

"Such fine, perspective lines that stove has," mused John, leaning his head back in his clasped hands and looking too provokingly comfortable. "We might have coffee and waffles. I am desperately fond of waffles."

"We can have waffles just as well as not," I returned, with a desperate attempt at calmness, "if you can turn old pewter porringers into waffle-irons."

"I could get along with flapjacks," said John, with just a hint of patient reproach in his voice as he turned over his papers and tried to find where he had left off.

"We can have nothing but dry, toasted crackers, and all those lovely Vienna rolls rising up and running over in the tins."

"Couldn't Ellen manage to boil them somehow in dumplings?"

"You suggest it to her, John."

John has just loads of genius, but not one grain of common sense. Of course, I couldn't really blame him for being taken with this gray old cottage set off with green ivies, and pink and white honeysuckles clinging all over the roof, and the tiny lead-paned windows sliding back so beautifully to let in the fresh air and gray sparkle from the sea, while the tarnished gilt lettering "1692" over the door was in itself a legend.

"The name Snug Castle is so alluring you know, Sonsy," John had explained, apologetically, "with all these whale jaw-bones and vertebrae arranged so naturally around the door-step. They make one feel acquainted with a real sea-faring life, and remind Captain Marrows of such monstrous sea-stories. And just observe the style of that door now, Sonsy, swinging open in halves, with the great wooden latch below, and above that peep-hole of a ship's side-light. With you leaning there on your elbow, who could resist such a door as that?"

Once inside the door I was immediately enchanted with the rows and rows of old blue china, and deep fireplaces furnished with cranes and pot-hooks and brasses, or picturesque with highly colored Dutch andirons.

"I knew you would like it all, Sonsy," he confided, in his boyish way, and hurried me from room to room in eager excitement, until we were both fairly bewildered with the riches of three-legged stools, ivory portraits, curious lamps, silhouettes and all the accompaniments of a yellowing old story-book such as one opens on a winter's evening with an expectant sigh of ecstacy and closes with a yawn. The best chamber would really have been large enough to turn around in had it not been for a four-post bedstead corpulent with valances and feathers, accompanied by a stately chest of drawers glittering with brass knobs. This room had rather a shivery, musty air, as if occupied by sea-fogs which had surreptitiously crept in and never been able to find their way out again; and it occurred to me that if ghosts ever walked in the house at all they must frequent this dimly lighted apartment.

John's countenance fell when he saw the dubious look of disapproval with which I regarded the perspective stove in the kitchen; but he assured me there was a most interesting history connected with this battered and rusty article of furniture. He could not remember, though, whether it was said to be an heirloom brought over with stacks of other furniture on the Mayflower or whether it had been around the world in a whaler. While either circumstance might give it untold value as a curio, I suggested that they could not in any way add to its merit as a cook-stove. But John was not to be chilled in his joyous enthusiasm, and at once distracted my mind with a long-nosed, pink-flowered tea-pot which he discovered on the top shelf of the cupboard, besides bringing to light the dearest little pair of bellows hanging beside the stove, and afterward craftily opening the kitchen door when I was dumb before the ravishment of an unexpected view of the sea shining before us as blue and crisp as any bay in Naples.

When not setting forth the proprieties of a three-cornered stove which could be set out of the way in a corner John had spent most of the time assuring me of the unusual advantages of a cockloft, to which one clambered by a steep little ladder, and entered through a square hole in the floor. In this tiny loft were two bright, sunny rooms, the one looking east and the other west, to catch the first and last flush of these honeymoon days at Sconset. Here were set a few pieces of rare, hand-carved cherry-wood furniture, brass candlesticks, snuffers and narrow mirrors in tarnished gilt frames under Dutch landscapes which made one laugh just to look into them.

We set aside one of these cunning rooms for Ellen, the cook, a middle-aged woman of generous proportions, who found some difficulty in mounting to this interesting cockloft; in fact, she stuck fast in the opening at the head of the ladder. Fortunately John had gone before, and was able to give her vigorous pulls from the top, while I encouraged her from the bottom, and so, after some puffing and blowing, Ellen was safely landed in this engaging cockloft.

Having settled ourselves with no little discomfort in the stuffy, picturesque rooms below, we seemed to have just lost ourselves in sleep when, in the small hours of the morning, we were suddenly awakened—not by the sliding step or swirling spectral robe of any ancestral ghost, as might reasonably have been expected, but by a distinct groan, followed, after a pause, by low, angry mutterings considerably muffled by the hoarse thrumming on the sand of a heavy, tumbling sea outside. A moment more and a shriek from Ellen brought us to our feet in dismay. Upon investigation it appeared that our faithful cook had arisen at this unearthly hour to mix bread, and discovering, after her feet reached the second round of the ladder, that she could descend no further, she had lifted up her voice with such vehemance as to awaken half of the island of Nantucket, to say nothing of arousing all the fowls in the neighborhood, who sat up a sympathetic crowing and cackling, like an orchestra tuning its strings.

In vain we expostulated with Ellen, telling her that if she went up through this hole at night she might be expected to come down in the morning. In vain we tried persuasion, reason, argument. Ellen declared the cottage was twice as small in the morning as it had been the night before. She couldn't come down forward, she wouldn't come down backward, and tacking sideways was not to be mentioned to a respectable woman of her years.

In the wildest of the tumult John remembered to call in our friendly neighbor, Captain Marrows. Captain Marrows had in earlier years been master of a whaling vessel, sailing around the earth and going through all manner of vicissitudes and hairbreadth escapes. Now, John argued that a man who could leap with his companions from a whale-boat, just clearing the whale's jaw before it crushed the little shell to pieces could certainly rescue his friends from almost any unpleasantness or peril, so we were immensely relieved to hear a kindly, rugged voice calling, "What the devil's up now?" as the captain's ruddy countenance and broad, stalwart shoulders darkened our half-swung door.

"It isn't the devil," John explained, with politeness. "It's our cook, Ellen. She is up in the cockloft, and we can't get her down."

"What a grand voice for a fog-horn, now," pursued the Captain, regarding the ladder with interest. "Why ain't the cockloft a good place for her?"

Ellen's howls were lowered at once to miserable gasps and sniffs which would have dented a harder heart than that of Captain Marrows. Even a whale, Captain Marrows says, has a soft spot.

"Cruisin's rather rough in these parts!" remarked the Captain, putting his rosy face into the scuttle with a reassuring smile at Ellen, so pitifully weeping on top of her ladder. "Cruisin's rather rough this morning, now ain't it?" And before this blinded, surprised woman could have any idea of his intentions the Captain had grabbed Ellen by the knees and brought her down like a blubbering baby whale. It is needless to say that during the remainder of our stay in Sconset Ellen reposed upon the feathers of the four-post bed in the best room, while John and I mounted to the cockloft and hung our clothes on pegs.

"I bake forty loaf o' bread to-day, an' sold it, every smitch"

I can never tell just how it happened—whether this affair of Ellen's had shaken my nerves or whether John's indifference over the behavior of the perspective stove and unjust ridicule of the dry breakfast had flown away with my last bit of temper—but one thing led on to another until in an instant, like sheet-lightning, came a flame of indignation, and I heard myself saying, in hot flaming passion; "You were such a simpleton!"

I remember how the ridiculous little Dutch clock kept making faces at me, and all the rows of blue china around the room seemed to swim in indigo for the next moment, and then came John's voice, speaking quite calmly and deliberately, "Yes, when I married."

In the awful stillness which followed, the staccato cry of a sea-gull came through the open casement with the voices of men on the sand putting out their boats, while the breath of a string of pink honeysuckles John had torn from the roof that morning to fasten around my waist came floating into my face with poignant sweetness. It was only a minute by the clock, but it seemed like a bit of eternity, the time it took for this first quarrel with John.

Without another word my husband hurried off to the fishermen. After a little Ellen was heard to resume her struggles with the perspective stove, while I, slipping out of the house unnoticed, found myself blinded with tears, stumbling over the sandy ruts and grass-grown ridges of the winding little lanes about Sconset. Of course, I lost my way at every turn, but was sure whichever way I ventured to come upon some sign of shipwreck. The gray old cottages, shingled all over to keep off the ocean's spray, were decorated with splintered oars, rusted anchors, stern-pieces, pilot-wheels or time-worn figure-heads of men and women taken from shipwrecked vessels—all of which seemed to me perfectly natural, for was not the whole world shipwrecked this gray, troubled, summer's morning?

My aimless wanderings brought me out at last on the lonely moor, where I dropped down in a bed of heather, a limp little heap of misery, and under the friendly covert of sweet-fern and huckleberry-bushes I had it out in a jolly good cry. After a long while the warm, fragrant air, the brooding sky, the wide, desolate, purple moorland, and even the rhythmical beating wings of a solitary auk floating overhead, breathed something of their calmness and gentleness into my spirit, and as I turned homeward I tried more patiently to readjust my ideals of happiness in wedded life, but found them as obstinately tangled as the wild rose and blackberry-vines crossing my path.

Coming out at last on the highway where a weather-beaten red pump kept company with a venerable lichened mile-stone, I sat down to rest and meditate. 7½ M was marked on the stone, and I wondered whether it would be possible to walk so far, for I knew this friendly stone, beaten and weather-stained, meant to tell me that it was seven and one half miles to a loaf of bread, a tinsmith or any fair-minded stove that would bake on the square, and not on the perspective. Lifting my eyes at this despairing moment I was attracted by a sign in the window of the neat little cottage opposite, which appeared to me as pleasing as any beacon-light shining across the gloom to storm-tossed marine. The cheering words were simply these, "Fresh bread daily."

In answer to my eager knock there appeared at the cottage door, after a moment's pause, a kindly old lady with such a laugh in her friendly blue eyes that in my forlornness I could have embraced her then and there.

"Scuse me for keepin' you waitin'," she said, in Nantucket speech oddly enough mixed with a soft foreign accent. "I haf awoodin' leg.—I wass shipwreck off Sconset—yess, I wass shipwreck here fifty year ago."

I wanted to say that I, too, had been shipwrecked off Sconset, but only tears came in my eyes as I murmured something about bread.

"Did you want a loaf o' bread? Come right in my kitsin an' sit down. The bread iss not done yet. You muss scuse how things look in my sittin'-room. My hushan' when hee wass a young man used to be ferry partiklar, but now hee iss seventy year old an' hee iss gettin' careluss. Hee will smoke in my sittin'-room, an' hee will leafe hiss pipe an' papers an' everythin' aroun'. Hee say, 'Why don' you leev' things aroun' where I can fin' them?' An' I say, 'Why don' you put things away yourself, same's other men, then you know where they are.'"

"Oh, don't scold him!" I entreated quickly.

"You say not scold him when hee puts hiss hunt mattses an' tobacco on my clean table-cloth. Yess, I will scold him, an' hee will give me a hard word back. I snap Georgze an' Georgze snap Frederika—that iss the way it iss in married life, an' it don't amoun' to a row o' pins," and Mother Frederika laughed softly as she went on patting and rolling the crust for an apple pie. "Georgze iss good to me, an' I am good to Georgze. We unnerstan' each other. It wass Georgze's father, a sea-cap'n, hee carried me home in hiss arms when I wass shipwreck; yess, an' Georgze's mother she wass so kind to me, an' she learn me how to make bread. An' Georgze—three years after I was shipwreck Georgze an' me wass married." Such a tender look of happiness came into the dear lady's face with these words that every homely object in the old kitchen seemed to be glorified.

"Please tell me about the shipwreck," I pleaded, wishing to see once more that lovely look in her eyes.

"Not now," and Mother Frederika went on affectionately patting and pinching her pie. "I muss ten' my bread now. Some time I will tell you. Don' you want some all-wheat biscuit? They are yest splendid, my all-wheat biscuit. An' you will eat a molasses cooky, fresh baked this morning? A molasses cooky wont hurt nobody. My gran'son Jimmy, hee allus had a weak stomach, an' hee eat a molasses cooky whenefer hee feel like it. The great trouble with Jimmy's stomach iss to fill it up. Hee can eat half a peck o' potatoes an' four leetle squashes an' a whole loaf o' bread at one meal. I say, 'Jimmy, your wife can come to a meal whenefer she feel like it, but you can't come, Jimmy, 'less I do extra bakin'.'

"Jimmy hass a shop back o' the kitsin, an' he men's everythin' in this village. You will laugh to look in the shop and see what Jimmy men's. Hee iss a good gran'son as ever lived, Jimmy iss. Yess, those are Jimmy's chil'ren

playin' in the yard—my great-gran'chil'ren. They are wonerful good chil'ren—those great-gran'chil'reu."

Loading me down at last with a loaf of crisp, warm bread, a bag of all-wheat biscuit and another of cinnamon-buns and cookies, Mother Frederika said, with a look half laughing, half sympathetic, in her blue eyes, "Jimmy will men' your stove. I tell him hee muss do it. Hee can meu' anythin' in Sconset, my Jimmy can."

With this comforting assurance I started back to Sung Castle, and someway the grassy lanes cutting across pasture fields looked quite different to me now that I knew Mother Frederika lived here, and I could not help noticing how friendly were the latch-strings hung out on all the wicket gates, and how gay were the sailor-boy weather-vanes whirling their oars as a fresh breeze turned them merrily on the gate-posts, for the air was sweeping in fresh from the salt water, and now that the clouds were lifting, the sea was blue and sparkling as if cut in sapphire.

I fancied once or twice a footstep hastening behind me, and once or twice a shadow which seemed to turn with my shadow made me hurry a little, so that just as I stepped nervously into the vine-wreathed tea-room at our cottage door I tripped my foot and would have fallen had not a pair of strong arms been thrown around me and held me fast. I never meant to make up in any such commonplace way, but what could I do with my arms full of bundles and that look in John's eyes?

"I have been across Nantucket," John explained after a little, "and there is not a stove on the island that will fit into this scrap of a kitchen and leave room for Ellen. What shall we do, Sonsy?"

Then I told the story of my morning's adventures, and how I found "Jimmy," who could "men' anythin' in Sconset," and Jimmy's grandmother, who could "bake anythin'." In proof whereof I opened the bag of delectable cinnamon-buns.

From that day Jimmy was a frequent visitor at our cottage, mending not only the perspective stove, but every other old relic which John could think needed stringing or heartening up. One day in the tea-room, where Jimmy was regulating the Dutch clock, he gave us a few shreds of the shipwreck story into which we could weave our own fancies.

It was during a wild December gale that an incoming vessel was driven "to the southward" off Sconset, on the rocks known as Old Man's Reef. Beaten with terrific force upon the reef by heavy breakers the vessel sprung a leak, while her main mast was split in two and her rudder carried away. There was nothing to do but cast anchor toward land and wait for help. All the old sea-captains in Nantucket were out with everything from a tow to a cat-boat, but it was three days before any vessel could venture into the boiling sea near the reef and rescue the passengers.

"That was the day before Christmas," continued Jimmy, "an' a lucky Christmas it was for Nantucket. Old Cap'n George Berry had three hundred dollars for pilotin' the rich cargo into Boston, but better'n that was the girl he brought home from the wreck. She was a picter to look at, an' all the islanders were falling in love with her. But the story you heard in the Museum about her being washed ashore on the spinnet wa'n't true. The spinnet came from her father in Düsseldorf a long while after. The old Cap'n's son, that was my grandfather, married her—they say for her beauty, but he says it wa'n't that. It takes more'n beauty to hold people fast an' true to each other for fifty years," and Jimmy put up the clock.

We had despaired of ever hearing this story of love and shipwreck in its completeness, when one evening by good fortune we found Mother Frederika sitting outside her cottage door, her hands idly resting in her lap.

"I bake forty loaf o' bread to-day, an' sold it, every smitch," she confided to us, triumphantly, "but I muss res' a leetle now before I mix any more. Georgze hass gone for my yeest-cakes. My husban' hee iss so good to me." All the love and tenderness of Mother Frederika's heart shone through her clear face whenever she spoke of "Georgze, my husban'."

"Do you often have such sunsets here?" inquired John, for at this moment the whole heavens from west to east were flaming and palpitating with glory.

"I wiss you see our sunsets here when the fishin'-time begins," returned Mother Frederika, radiantly. "It iss the time when sunsets are fine, and I haf seen this fence by the sunflowers choke-full o' artists sketsin' till midnight."

Taking out his note-book, John gravely made a memorandum of this interesting item.

"My wife tells me you have lived in Düsseldorf on the Rhein. I have often been in Düsseldorf when I was a student in Berlin."

John had touched a key which set into vibration for Mother Frederika a thousand sweet memories.

"You haf been in Düsseldorf? An' you know how grapes grow am Rhein?" Her voice had a ring of joy in it like that of a glad child.

"There is nothing like Düsseldorf in this country," returned John, sincerely.

"No; it iss nothing like it in this country," assented Mother Frederika, her face beaming with the thought of those sunny days of long ago.

"It wass in Düsseldorf," she continued, as in a reverie, "I wass taught to do all kin' o' knittin' an' lace-work an' fine needlework, an' I wass smart in my work. I could knit two stockin's to once, an' make lace night-caps, an' tidies, an' velvet bags such as ladies hang on their arms, all embroider wif roses an' forget-me-nots, an' knit silk bags in steel beads wif vines all aroun'. Ev'ry bead wass counted an' strung on a black thread, an' it wass hard for the eyes. Afterward I hired apprentisses, an' we went from house to house by the week an' cut an' made dresses. One rich lady, findin' I could be useful in her family, asked me to go to America, but my father an' mother would not give their consent. I wass all they had, an' I wass a pretty girl, wif hair yellow as floss-silk in curls aroun' my shoulders, an' cheeks as fresh as roses, but I wass not good to my father and my mother. I wass wild to go to America, an' I went—I went against their command. I lef' them alone."

The pink flush of sunset was fading out of the sky, while the full moon beginning to burn in the east set the ripples of the sea flashing and shining as if lit with a thousand candles. Mother Frederika was silent a little, listening, it may be, to the waves breaking on the sand in a continuous murmur, like endless hives of bees.

"It wass on the great steamer 'Louis Phllippe,' wif a rich cargo of satin and velvets, we sailed in the time of December.

"A long time we were out in the stormy weather, until one mornin'—it was near Christmass, wif thick snow blowin' about us in blin'in' sheets—we stopped suddenly, wif such a crash an' roar o' waves as wass makin' uss all deaf.

"I wass in the cabin, an' thinkin' we had come to shore, fool-hardy like I hurry on deck yest as the mast came crushin' down, an', like the hand o' judgment, it fell on me. I cannot make it plain in words, this great sufferin' in the time afterward wif my broken leg, but the hardes' part, more'n the pain an' hunger an' awful storm, wass this thought—I wass punished because I haf not honor my father and my mother."

As she spoke Mother Frederika bent her head and humbly wiped away her tears. I saw John pull his hat over his eyes, and I wondered, as I tried to swallow the burr of a sob in my throat, if he felt as guilty as I did in letting her suffer all this anguish over again.

"For three days," continued Mother Frederika, "we waited for help, but no help came. For three days, as the ship filled with water, we had no water to drink, no morsel o' food to eat, an' our clothes wass freezin' to ice as the sea-water washed ofer us bitter cold. Women as well as men were workin' at the pumps, an' some lashed themselfs to the rigging—we expect any time the ship muss go to pieces, so wild, so furious the storm beat ofer us on the rocks.

"But God wass good. At las' the win' went down, an' a Nantucket boat saved us, every one, three hundred lives; not one wass lost. It wass very hard goin' from one steamer to the other, an' three old men, sea-cap'ns, carried me in a chair because I wass hurt. I could not understan' one word of Englis', but it seem to me one man said to another, 'Drop her!' Screamin' wif fright I threw my arms aroun' the old man's neck an' clung for my life. An' this wass on Christmass evenin', when the Christmass tree would be lighted wif candles at home, an' I wass a shipwreck, a runaway, helpless wif strangers, in agony o' fear an' pain. I cry all the time.

"But God wass good to me. In the crowd as we came in Nantucket wass waitin' a young man. He wass learnin' the ship-joiner's trade, an' he said, 'I wiss I could carry that girl.'

"An' the old sea-cap'ns they yest laugh at him, an' told him he wass too young, a lad only seventeen, an' they push him away.

"An' that lad swore that night in hiss heart, 'I will take care o' that girl while I haf a blue vein in my body.'

"Wass it not strange," Mother Frederika went on, with a laugh in her eyes and a voice tender and soft as music, "that young man wass Georgze, my hushan'?

"On Christmass mornin' the Nantucket people came wif stockin's filled wif Christmass gif's, an' clothes, an' oranges, an' everythin' that I need. An' they were all so kin' I could not understan' it. I could do nothin' but cry. The old sea-cap'n came to see me, an' lef' a twenty-dollar gold piece in my han', an' when it roll on the floor they would make me take it. Hee said it wass for huggin' him so tight. An' the other cap'n sent all the way to New Britain for a surgeon who could speak to me German. An' Georgze's mother she wass so good to me, an' care for me like her own chile.

"After while a letter came from my father, an' hee said I had broke all the ten commandments, but I wass hiss daughter, an' hee would do all hee could for me; but the Nantucket people would nefer let me go back. An' the rich lady who had forgotten me when the 'Louis Philippe' was shipwreck an' lef me alone on the island, when she heard I could be of use to her she sent for me, but Georgze would nefer let me go, an' I fell in wif such good people in Nantucket I could nefer leave them.

"When Georgze was twenty we were married, an' went away from Nantucket, an' Georgze did well in hiss trade, an' laid up a fortune, but one day hiss partner run away wif everythin'. We were over fifty year old, an' that wass Georgze's shipwreck. An' Georgze feel so bad, hee said, 'I feel as if I could jump overboard.'

"Georgze," I says to my husban'," "when I wass shipwreck you wass good to me; an' when for two year I could not walk on my foot you carried me in your arms like a baby, an' work all day an' took care o' me all night. An' when you hear me say 'Unser Vater im Himmel' you taught me 'Our Father in Heaven,' and those were the first Engliss words that I speak. You haf been good to me, Georgze, an' now I am strong an' well an' can work all day on my woodin leg, an' I will be good to you.

"So we came back to Nantucket, Georgze's birthplace, an' I bake bread an' do fine needlework for rich people, an' save a thousan' dollars an' bought this cottage at Sconset. It wass a good cottage, belongin' to a rich lady, an' she lef' furniture an' china dishes an' everythin' in it, an' some things wass belongin' to her great-grandfather a hundred years ago.

"So we haf a home, an' Georgze earns money, too, an' hee says, 'Frederika, you wass a good wife, an' we can weather it through now.'

"Hee believes in foreordination, my husban' does," Frederika went on, her voice joyous and beautiful with love, "an' hee believes it wass foreordain' the shipwreck bringin' me in to him on Christmass night. Here hee comes now wif Jimmy's baby. How that leetle Frederika loves my hushan'!"

New Forms of Social Entertainments

BY HEZEKIAH BUTTERWORTH

THE family, the schools, the grange and many social and literary societies often ask during the winter and early spring, "What shall we have for amusements? What is there new for our merrymakings at the society, club and social party?"

Novelty is one of the charms of social life. This season the electric star in towns and cities has blazed among the evergreens. Electric-lights are to be one of the new joys of the future holiday festivities.

Let us first speak of new entertainments that are suitable to charities. The old-time hall decorations of pines, hemlocks and creeping vines may be followed by palms, as palms are now common to greenhouses and gardens. The surface, or ground, palm may be made to represent an oriental palm-tree by attaching to it an artificial trunk. Or palm fans or branches may be artificially made of green paper.

In the Carolinas and Florida and in the Gulf States real palms can be readily obtained. Palms are almost universally used in the North for hall decorations.

A NEW CANDY PARTY FOR EASTER HOLIDAYS

Make an artificial grove of palms after the manner suggested, or have a single palm for a gift tree. This delight is quite suitable for Palm Week and Easter. Let the tree be hung with clusters of the date-palm. Prepare the dates in this way: Take out the seeds, and fill them with nuts of many kinds. Put them into gauze bags, and attach them to the tree around the trunk at the top, under the leaves or fans. Have a step-ladder by which to gather the clusters of dates. Then have a program of palm songs such as are sung on Palm Sunday or on festival occasions, or such hymns as "Once Was Heard the Song of Children" and "Coronation" (processional).

Let the conductor of the exercise relate the historic and biblical oriental stories of the date-palm tree, to be followed by recitations of like character, as the "Date-palm in the Desert" (see Longfellow's "Poems of Places,") or by songs from the popular American and English cantata "Under the Palms," as " 'Neath the Palms' Protecting Shade."

After these exercises let a boy gather the clusters of dates. When the children find that these luscious dates are full of many kinds of nuts the suggestions of the palm-tree will be made delightful. This exercise will be instructive, entertaining and beautiful.

Bags of these date-palms with nuts may be sent to the old people, invalids and children at home, and they will always prove acceptable gifts.

Nuts covered with plump dates are delicious, and they have the flavor of the Orient, and so suggest or illustrate the parables of the holiday season.

There are few entertainments that will prove more satisfactory than this, and the cost is but a trifle.

RED-SETTLE TALES

A settle in old New England times was a long bench with a back, usually painted red. It was placed before an open chimney fire. Folk-lore tales were told upon it.

A red-settle party in the characters and costumes of the olden time may be made a fair for church or hall.

In New England the old menu of Puritan days may be produced, as succotash, no cake, pandowdy (an immense apple-pie), apple-dumplings, and in the evening a great bench with back painted red—for "a settle"—may be set before an open fire, and good people enough to fill it may appear in the costumes of their grandfathers and grandmothers and tell the tales and sing the songs of old. The following are some of the good old New England songs: "The Breaking Waves Dashed High," "Old Oaken Bucket," "Sword of Bunker Hill," "Tenting To-night," "Rock Me to Sleep," and "Steal Away."

"Grandmother's Lesson" will answer the demand for a humorous song, or the old comicalities of "When I was a Maiden," "Johnnie Smocker," or the schoolmaster's song:

"Come, come, my darlings,
And let me see
How well you know
Your A. B. C."

recalling a "jolly old pedagogue long ago." Such songs as "Reuben and Rachel" acted, the fiddle-music of old huskings and "paring bees," and the "stately minuet" in costume, befit a party of this kind.

THE DUMB SUPPER—A DROLLERY

Appoint a majordomo to keep order and to prevent any levity at the table during the meal. If any one laughs at the table the majordomo should require him to leave the table. The majordomo should be a pompous person, in stately costume, and use a deep, solemn, commanding voice. He may have a ribboned wand, like a Fourth of July drum-major.

The party are to enter the room in silence, eat in silence, and help each other at the table in silence. The guests are to point out to others the luxuries to which they would be helped, and all should be officious in helping others. This service in silence produces one of the drollest pantomines imaginable. The majordomo finds so many irresistibly laughing that he soon has to lead nearly all the guests away. A few keep their gravity, and they are more comical than all the others.

THE BOOK PARTY

This is a "utility" entertainment. I was asked to conduct such a social last year in an old Massachusetts town, and the following announcement of the plan and purpose of the party was made:

"A book social will be held at the rooms of the Clinton Y. M. C. A. Friday evening, January 25, 1901, at eight o'clock.

"There will be an attractive program of music, including a number of old New England songs, during the evening.

"The object of the social is to secure money and books for the new library of the Clinton Y. M. C. A.

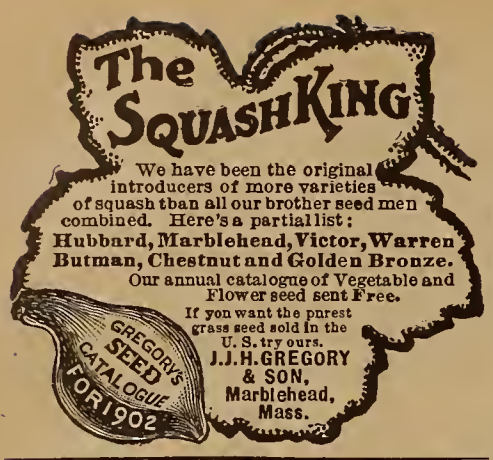
"Admission to the social and lecture will be by book or money. Each person attending is requested to give a book or not less than twenty-five cents for admission. The Association will decline to receive more than one book or more than the above-mentioned sum for the purpose of the occasion. Books may be sent to the Association rooms at any time before the night, and will be exchanged for tickets.

"On application the general secretary will be pleased to call on any friend of the Association to confer about books or any other subject in the interest of the work.

"In the event that duplicate books are presented, the extra copies will be sold by auction and the proceeds devoted to the purchase of other books."

SOME QUEER MERRYMAKINGS

The "Dutch doll," which was once a favorite entertainment in Trinity Church Chapel, Boston, in the days of good Phillips Brooks, is like the London "Punch and Judy," a spectacle with a charm. It is acted in this way: A young lady who is a good talker and singer lies down under a table which has a cover or cloth that nearly touches the floor; a pillow is placed under her head, she puts up her arms, and over her hands and arms is placed an immense Dutch doll, with a broad, flat, comical face, a great mouth and eyes, and a cap. The skirt of the doll conceals the head and arms of the young woman, and the table and its cover or table-cloth hides her body. A Dutch doll now seems to be standing beside the table. When the young woman thus concealed speaks or sings it is the doll that seems to be speaking or singing. The young lady's hands being inside the doll's head may cause the doll to make the most comical grimaces imaginable. The audience are permitted to question "Gretchen" in regard to Holland and her voyage over the sea, and perhaps to have their "fortunes told." Gretchen gives advice, sings comic songs, and tells a Christmas story, which "beats the Dutch."



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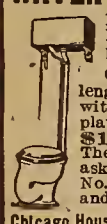

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Cast Iron Roll Rim Bath Tubs, length 5 ft. Complete with full set of nickel plated fittings, each, **$11.00.**

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$10,000 Send ten cents for a 3-months' subscription to YOUNG FOLKS AT HOME and learn all about the 1,200 Premiums—amounting to $10,000—offered by LAKE VIEW SUMMER RESORT, Catawba Island, Ohio.

We have seen this diversion last for a whole evening amid shouts of merriment.

READINGS WITH MUSICAL ACCOMPANIMENTS

These, if done well, are among the most interesting and beautiful of the new forms of hall entertainments for holiday evenings. Bellew made a success of such readings in England. We do not mean for one merely to read with an interpretive accompaniment on a piano, but to recite with true musical situations. A story entitled "How Dot Heard the Messiah" has been much read in this way; also "Robert of Sicily" (Longfellow), with the music of the "Magnificat." The "Arkansas Traveler," though old, has a charm that will always be new when read or recited in this way. Musical tableaux which illustrate old New England songs, as "The Breaking Waves Dashed High" (The Landing of the Pilgrims), "The Old Oaken Bucket," "The Sword of Bunker Hill," "Rock me to Sleep, Mother," "Tenting on the Old Camp-ground," "Vacant Chair," "Battle Hymn of the Republic," "Angel of Peace Thou Hast Tarried Too long," etc., may be made to fill an evening, as also plantation songs, and each entertainment may end with "Home Sweet Home."

NEW CHARADES

The party of historical characters, a kind of acted charade, is very interesting, and it may be made to take a new form.

Each character may appear in a costume that represents some historic person, and be welcomed as he or she comes by proper recognition, but appear very indignant if the hostess and guests do not rightly guess his or her name. The hostess may say, on the arrival of a new guest, "Let me present to you one whom all the world knows, and so of course yourself (or yourselves), Mrs. or Madam or Queen—." The guests must try to recognize the new-comer, and they give great offense to the visitor if they fail.

The acted charade of a single word and acted titles of books are so popular that an ingenious new form of suggestion becomes well known, as "I've-an-hoe" for "Ivanhoe."

Among new book-words which may be acted or oddly represented for guessing are "ons" for the "The Last of Barons," and "ans" for "The Last of Magicians."

A night-cap may be placed on a plate of flour for "When Knighthood Was in Flower."

A man may wear on his back the written question "What is this called?" The answer will be, "Called Back."

A cipher (0) may be attached to a dress, and the wearer may make much ado about it, and pretend to wonder how it came there, and its meaning, for "Much Ado About Nothing."

A match may represent "The Lamplighter."

"The Old-Fashioned Girl" may furnish a subject for a little comedy.

For a general charade the word Teutonic (too tonic), with an invalid for a principal character, will also suggest a comedy.

Hall Caine (Hall-cane) suggests a comical situation.

THE BOOK-REVIEW PARTY

Form a club, assign members to read certain new books, and to tell the story of the contents of the books and to review them. Such a club may be made as interesting as a story-party, and is as rich in information as in interest, and may be participated in by older as well as younger guests.

"IT"

The sphinx's riddle was, "What is that that has in babyhood four legs, afterward two legs, then three legs, and is the feeblest when it has the most legs?"

It is not difficult to guess, but a very funny evolution of a popular play for children may be made to take this name. We refer to the play "It." In playing, "It" is one's right-hand companion. "It," therefore, may be a boy or a girl, a man or woman, old or young, have blue eyes or black, or be even a cat in a chair.

The guesser comes into the room, and is asked to find out what "It" is by questions. He asks, perhaps, "Is 'It' a boy?"

The person questioned has a girl on his right-hand, and says, "No."

He questions the girl at the right, "Is 'It' a girl?"

The girl, who has a boy at her right, says, "No," a truthful, but what seems to be a contradictory, answer.

This play may be made very funny and charming by calling in some important person, as the Judge, the Parson, the Lawyer or the Doctor to guess what the contradictory "It" really is.

A Life Behind Our Words

Ralph Waldo Emerson says: "Words have weight when there's a man behind," and no one may hope to reverse this fact. We have just read in the secular papers a letter reported to have been sent by ex-President Harrison to Dr. T. L. Cuyler, in which, after thanking him for some kind expressions made to him in a recent letter, he said: "I appreciate your kind words, and especially your noble life, which gives them value." Even if they be kind, loving, appreciative words, they sound hollow, and are entirely unhelpful unless there is a noble life back of them. And so there is an immeasureable value in a noble life.—Epworth Herald.

The Family Friend

An old and true friend that will help you in times of distress. When racked with pain you would give anything for relief. In the hour when the little child, too young to make its wants known, lies suffering, its little face drawn with agony; in the hour when the good wife, worn and tired, needs an arm to lean on; at all such times, when the calling of a doctor means a dangerous delay, besides great suffering and a heavy bill, there is nothing else so good as a bottle of

WATKINS'
Vegetable Anodyne Liniment.

We receive numberless letters like these:

SAVED THE CHILDREN.

CLARA CITY, Minn., June 14, 1901.

We had five children sick with **diphtheria** last winter and carried them all through in one week without any doctor. **Watkins' Vegetable Anodyne Liniment** should be used at once as soon as any symptoms appear. We mixed two teaspoonfuls of Watkins' Liniment with two of vinegar and one of salt. Gave some of the mixture once an hour, also rubbed the Liniment on outside of neck.

OTTO PETER.

HORSES WOULD HAVE DIED.

SHIPSHEWANA, Ind., June 18, 1901.

I have used **Watkins' Vegetable Anodyne Liniment** for nine years and find it the best remedy for **colic in horses** I ever knew. I saved two horses with it that would have died. Cannot speak highly enough of it.

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The best thing made for Cholera Morbus, diarrhea, flux, rheumatism, cuts, cramps, strains, burns, colic, mumps, sore throat, diphtheria, frosted limbs, etc. For horses and cattle it cures sprains, cuts, scratches, bruises, sweeny, colic, etc. Of course when you read this advertisement you may not feel the need, but the need of it may arise at any moment of the day or night, and then its worth can not be counted in dollars and cents. Order it the next time our agent calls, or if we have no agent in your county, send us your name and address at once, and we will see that you are supplied.

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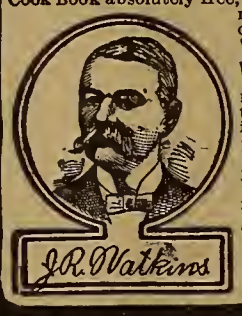
We send out a beautiful 100 page illustrated Home Doctor and Cook Book absolutely free, and want to place your name on our mailing list. It is the cleverest and most complete thing of its kind ever issued. Write for one to-day.



Wanted a Man. We want one good, open-eyed young man in each neighborhood who has a little ambition, and an inclination to get on in the world, to write to us. We are in a position to start him in a good paying business of his own. We have lots of young fellows, "boys" you might call them, who are making a nice thing selling Watkins' Remedies.

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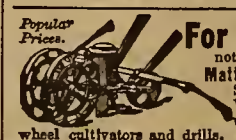

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The New Excelsior

The shades of night were all pulled down
As onward hustled through the town
A youth who bore where breezes stirred
A pennant with the single word
"Commercialism!"

His brow was moist; his eye below
Gleamed with a dull and smold'ring glow,
And like a cracked and ancient bell
Arose his queer, defiant yell,
"Commercialism!"

"Oh, wait!" the pastor hailed the youth,
"And humbly learn eternal truth."
"I'll think of that," the boy replied,
"When I have turned the golden tide.
"Commercialism!"

"Oh, come to school!" the master said,
"And fill with lore your youthful head."
The boy yelled back, as on he raced,
"Old man, I have no years to waste,
"Commercialism!"

"Oh, stay!" the maiden softly cried,
"And I will be your loving bride."
The youth called back, with scornful smile,
"Just wait until I've made my pile.
"Commercialism!"

Then cried the sage, "Beware the joys
That link themselves to golden toys!"
"Bah!" cried the youth, "you do but jest!
I've linked my life unto this quest.
"Commercialism!"

One day they found him dead and cold
Beside his chests of worshipped gold;
And on the breeze that round him moaned
They heard that fateful word intoned,
"Commercialism!"

—Cleveland Plain Dealer.

The Philosophic Horse-Thief—A Fable

A HORSE-THIEF who possessed a sense of humor as well as ideas regarding the fitness of things, which entitled him to a diploma as a philosopher, was once apprehended in a locality where stealing an equine is looked on with great disfavor.

The horse-thief was securely tied and left in a strong room, while the leader of the vigilants assembled his crew and secured a rope. The thief knew that he would soon be at the end of that particular rope, and he sat down to think it over.

A local exhorter went to him and pleaded with him to repent. "It is not too late," said the exhorter.

"But why should I repent?" asked the horse-thief.

"So that you may be saved and go to heaven," answered the other.

"And associate with angels?"

"Well, yes I suppose so."

"Say, you have made a mistake, haven't you? Don't you know that the stranglers are getting ready to hang me because I am not good enough to stay here in Arizona and associate with them?"

Moral—It was a shame to hang him.—W. Bob Holland, in Judge.

No Reflection

Dr. G. A. Gordon, pastor of the Old South Church, tells this story on himself, an experience he had when coming over from England recently. He had been unable to get a stateroom for himself, but on assurances by the purser that he would have for a room-mate some companionable gentleman, Doctor Gordon accepted what he could get.

"Now, after a short while," says Doctor Gordon, "I began to find myself thinking of some valuables that I had about me, and went with them finally to the purser to intrust them with him for safe-keeping.

" 'I would explain to you,' I said to the purser, 'that I am very much pleased with my room-mate. That is, I find him a gentleman in every respect, and I wouldn't have you think that—that is—I wouldn't have you think my coming to you with these valuables is—er—any reflection upon him, you know. His appearance is in every way—'

"And here," Doctor Gordon says, "the purser interrupted me with a broad smile.

" 'Yes, Doctor Gordon, it's all right—he has come to me with some valuables, also, and he says the very same things about you.' "—Boston Herald.

Extraordinary Enterprise

Grabenstein—"Dot veller, Swindlebaum, ish an enterprisin' cuss!"

Ikenheimer—"So?"

Grabenstein—"Yase! He is adverdisin' a greadt pargain sale to pegin at his store nexdt Monday, unless he happens to get pnrnt owit in der meandime; in dot event he vill open up a grand fire sale in der Cohn Building on dot date."—Puck.

Not His Patient

Lord Morris, of the Irish Bench, whose procedure is more noted for wit than for judicial dignity, was once trying a case at Coleraine, in which damages were claimed from a veterinary surgeon for having poisoned a valuable horse. The issue depended upon whether a certain number of grains of a particular drug could be safely administered to the animal. A dispensary doctor proved that he had often given eight grains to a man, from which it was to be inferred that twelve for a horse was not excessive.

"Never mind yer eight grains, docther," said the judge. "We all know that some poisons are cumulative in effect, and ye may go to the edge of ruin with impunity. But tell me this: The twelve grains—wouldn't they kill the devil himself if he swallowed them?"

The doctor was annoyed, and pompously replied, "I don't know, My Lord; I never had him for a patient."

From the Bench came the answer, "Ah, no, docther, ye niver had, more's the pity! The old bhoy's still alive."—Wave.

Didn't Like the Tonic

Not long ago Prof. N. R. Leonard, who was called recently to the presidency of the mining college at Butte, Mont., feeling indisposed, consulted his physician, a German, very scientific and acknowledged as one of the leading men in his profession in Montana. The doctor advised Mr. Leonard to work less at the desk, exercise more outdoors, and take beer as a tonic, something the Professor had never cared for. The doctor met his patient a few days later as he was leaving the college, and stopped to inquire how he was feeling.

"About the same," replied the Professor.

"Did you take beer as I directed?" inquired the physician.

"Yes," responded the Professor; "I took it a few times, but it became so nauseous that I had to discontinue it."

"How much did you take?"

"Why, I bought a whole bottle, and took a spoonful before each meal," answered the Professor.—Argonaut.

At the Wrong Place

A prominent congressman from the state of Illinois, after a long sojourn in Washington, D. C., returned to his home and started out to look a little after his political fences. At a small village hotel where he stopped for dinner, a scanty plate of fine roasting-ears was placed before him as a side-dish. Immediately upon discovering this plate of roasting-ears he abandoned the main hill of fare and applied himself exclusively to the corn. When the plate was emptied he called for more, and again for more, and continued his feast until he had made his entire meal from this luscious Illinois product. The hotel-keeper noticed the array of cobs stacked upon the plate of the congressman, whose identity was unknown to him, and said, "Say, stranger, what in the thunder do you want to board at a hotel for? The place for you to put up is at a livery-stable!"

The Teacher's Fault

School-teachers sometimes ask their pupils queer questions, if one may believe a story told by the youngest member of the Withington family.

His mother one morning discovered a shortage in her supply of pies, baked the day before, and her suspicions fell upon Johnny.

"Johnny, she said, "do you know what became of that cherry pie that was on the second shelf in the pantry?"

"Yes, ma'am," he replied; "I ate it. But I had to."

"You had to!" exclaimed his astonished mother. "What do you mean, child?"

"The teacher asked yesterday if any of us could tell her how many stones there are in a cherry pie, and I couldn't find out without eating the whole pie, could I? There's just a hundred and forty-two."—Youth's Companion.

World Getting Better

Mr. Crimsonbeak—"Do you believe that the world is getting better?"

Mrs. Crimsonbeak—"I certainly do."

Mr. Crimsonbeak—"What makes you think so?"

Mrs. Crimsonbeak—"Well, here's a paragraph in this paper which says the postal receipts this year will reach one hundred and eleven million dollars. In 1890 they were only sixty million dollars."

Mr. Crimsonbeak—"What's that got to do with it?"

Mrs. Crimsonbeak—"A good deal. It shows that there are fewer husbands now who forget to mail their wives' letters."—Yonkers Statesman.

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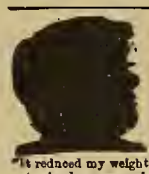

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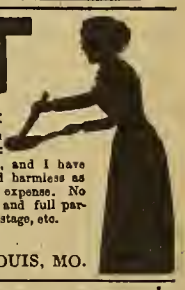

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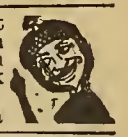

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294b Crown of Glory.....*Tours*
286b Danube River.....*Aide*
250b Darling, I Shall Miss You.....*Cohen*
176b Darling Nellie Gray.....*Hanby*
244b De Banjo am de Instrument.....*Rutledge*
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304b Did You Ever Call Me Darling?.....*Vane*
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290b Dream of Love.....*Elson*
310b Dream of Spring, A. Op. 1, 2....*Curschmann*
256b Dwelling With the Angels. Chorus...*Turner*
50b Easter Eve. Sacred.....*Gounod*
220b Ever Sweet is Thy Memory.....*Hosfeld*
318b Falling Star.....*Pinsuti*
180b Far Away.....*Bliss*
182b Father is Drinking Again. Temperance
152b Flag of Our Country. Patriotic.....*Mathiot*
156b Flag, The. Quartette.....*Fox*
144b Flirting in the Starlight.....*Delano*
138b For a Dream's Sake.....*Cowen*
66b For You We are Praying at Home.*Estabrooke*
166b From Our Home the Loved are Going..*Percy*
336b Frost Upon the Pane.....*Wallerstein*
288b Gathered Roses.....*Pinsuti*
202b Give a Kiss to Me.....*Percy*
178b God Bless My Kind Old Mother.....*Jewell*
204b Golden Moon.....*Ivan*
262b Greeting Duet.....*Mendelssohn*
150b Gypsy Countess. Duet.....*Glover*
324b Haunts of Childhood.....*Dinsmore*
198b Heart of My Heart.....*Robinson*
272b How Can I Leave Thee. Duet.....*Greenwood*
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248b In Shadowland.....*Pinsuti*
266b In Summer Time.....*Marzials*
296b It Is a Legend Old.....*Offenbach*
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328b Jennie With the Sweet Brown Eyes..*Rutledge*
28b Juanita. Ballad.....*May*
242b Katbleen Mavourneen.....*Crouch*
196b Killarney.....*Balfe*
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130b Kiss That Bound My Heart to Thine....*Keil*
164b Larboard Watch. Duet.....*Williams*
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96b Lost Chord, The.....*Sullivan*
326b Love Divine, All Love Excelling.....*Stainer*
308b Mamie.....*Daly*
234b Margaretta.....*Balfe*
112b Massa's Sleepin' in de Churchyard.....*Keefer*
230b Memories of My Mother. Chorus.....*Allen*
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222b Musical Dialogue. Duet.....*Helmund*
232b Must the Sweet Tie That Binds...*Estabrooke*
76b My Home By the Old Mill.....*O'Halloran*
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On the other hand it is argued that where the hand separator is used the producer of the milk has it for use while it is still sweet and warm and more valuable than it ever will be at a later time. He is saved the hauling of the milk from his farm to the creamery and back again, a saving that is considerable in most cases. The hand separator reduces the number of trips to the creamery without reducing the revenues derived from the cows. Where only cream is delivered to the creamery there is no mixture of the milk from several farms, no hard feelings about the quantity of skim-milk received, no danger of carrying disease germs from one farm to another, and a considerable saving of travel during bad weather.

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"Red Albumen" for Hens

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Rye Hay

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Rye hay is a good feed provided it is cut at the right time. It should be cut when the rye is in the milk, or a little after, but before it is hard, and cured like any other hay. It will furnish a large amount of excellent feed. We used it one year, and found our cattle were exceedingly fond of it. We did not, however, make any comparisons to determine its value as compared with other hay.—Wallace's Farmer.

Catalogues Received

G. L. Taber, Glen St. Mary, Fla. Handsome catalogue of the Glen St. Mary Nurseries.

Aultman, Miller & Co., Akron, Ohio. Illustrated catalogue of the Buckeye harvesting machinery.

The Brown Fence & Wire Company, Cleveland, Ohio. Illustrated catalogue of farm and railway fencing.

J. I. Case Threshing Machine Company, Racine, Wis. Elaborate catalogue of complete outfits of high-grade threshing machinery.

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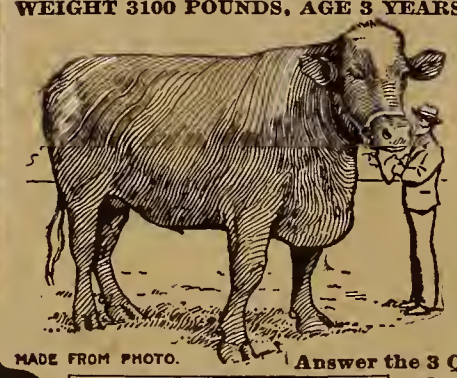

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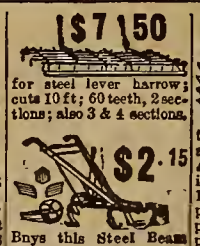

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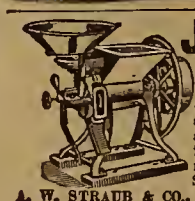

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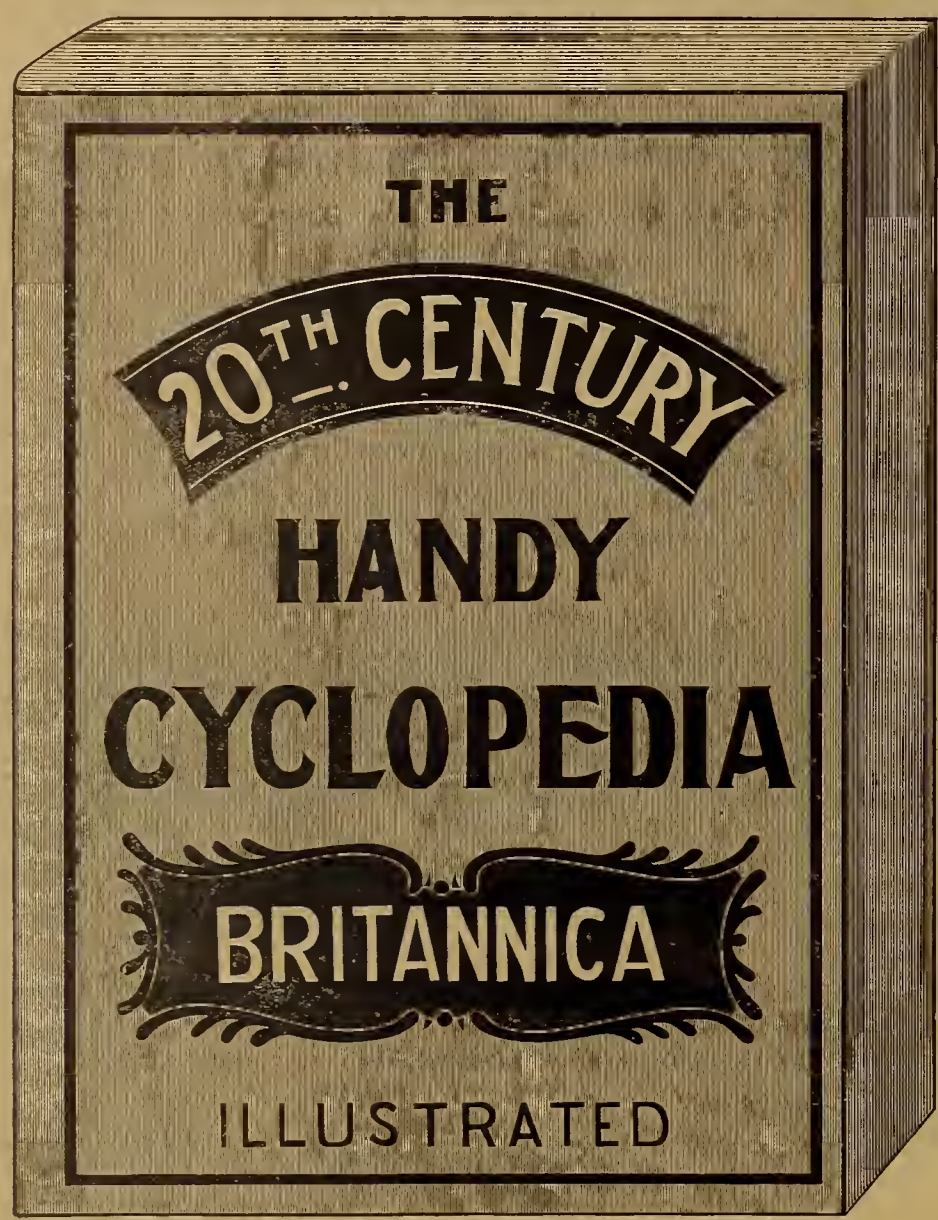

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THROUGHOUT the entire Orient customs in the same country vary in different localities to so great an extent that it is impossible to get the range of affairs without contact with the people of different and remote sections; hence a custom that may prevail extensively in a particular region is not only unknown but also unheard of in other parts. In visiting a distant section recently I observed some very unusual customs peculiar to that locality.

THE PAWNSHOPS OF A COUNTRY TOWN

Learning that there were fifty pawnbrokers in a small town, I set out to inquire how it was possible for so large a number to do a thriving business in so small a village. The first place at which I called was an old firm, where the business had been handed down for four generations. Unlike our own shops, there is nothing whatever to indicate the advantages (?) of a visit within. Without sign or advertisement the customer finds his way to the large room just off the street, and enters into private negotiations for a loan upon articles. Strange to say a very large per cent of the patrons of this institution are farmers. When the cold weather is over and the scanty proceeds of the last summer's crop have been consumed, he finds himself out of ready cash and financially unprepared to begin the spring work. A very bright thought comes to him. He gathers up all the winter bedding; cleans, brushes and renovates it ready for use the next season; then casts about to gather such garments as the family can dispense with during the heated season and, well ladened, makes his way to the pawnshop where he is able to realize ready cash. The value of the goods is determined by a standing committee from the pawnbrokers' guild, and two thirds of their value is handed over to the farmer with the privilege of paying two and one half per cent a month, the rates having been determined by law, the interest of a certain period being collected in advance.

When harvest-time is over and the fall tells of the approach of colder days, the farmer takes another trip to town. This time his bundle is not so large. He has gathered in all the fishing-nets and the large mosquito-net that really constitute the only furnishings either for house or bed for the summer, and, releasing his winter goods, draws a much smaller amount on his summer trappings. There are hundreds of farmers who never know what it is not to have a pawn-ticket in the house for most of their earthly belongings. One broker told me that there were families with whom he had done that sort of business for nearly thirty years. It appears to be a common practice.

More curious than this is another custom that is carried on in the same town and neighborhood. There are several business firms who keep on hand large numbers of fatons (floor-beddings) expressly to hire out to be pawned. If the farmer has not sufficient bedding of his own upon which he may raise a desired sum he proceeds to this establishment where he rents five fatons for five dollars, agreeing to pay ten sen (five cents) a day for their use. He takes these at once to the pawnshop and raises four dollars on them, the broker not knowing the real owner.

The rent is generally paid by the week, but the moment the amount is not forthcoming the merchant comes down upon the farmer, who gives up the pawn-ticket, and the broker is the loser, but the poor farmer must face the law that sends him to jail for "getting money under false pretenses."

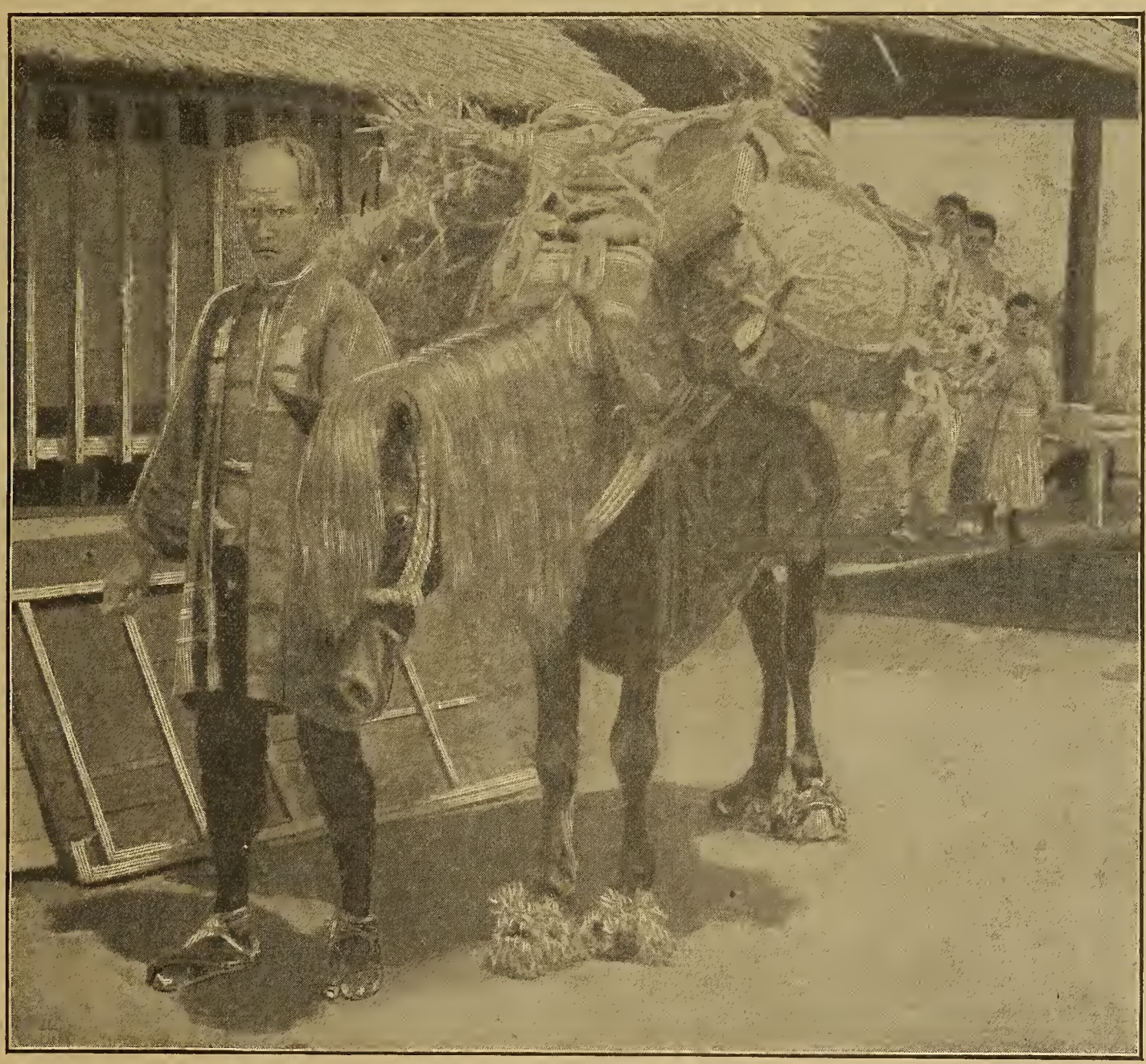
USE OF THE STAGE IN COUNTRY PLACES

In order to fully appreciate the highest form of drama in Japan it is necessary to be in this country during the time when the noted actors are performing. Japan has but two noted men on the stage; women never have given themselves to the profession, excepting in very low resorts. These two men have descended from a long line of actors, the ancestors of one having been traced back in a direct line for nearly three hundred years, and the other claims to come of stage stock for nearly a similar length of time. Nothing could be a greater surprise to a Westerner than a visit behind the scenes; a closer insight to stage management and an opportunity of witnessing a performance in tragedy—a phase of acting in which they excel.

For something positively unique, one must make his way to the rural districts, there to witness the country theater. In some respects it is likened to the port theater, where the foreigner gets his only idea of stage art, and from which he draws his conclusions, putting them in print or rehearsing them as samples of high acting in Japan. Perhaps the country theater is a shade more grotesque than those which flourish in the ports, but the many uses to which the stage is put in rural regions have been undreamed of in other lands.

In many of the small places sanitary conditions are shocking. The neglect of unkept gutters and dirty streets frequently breeds disease in a most deadly form, sweeping away thousands in a short time. When such an epidemic is raging in small places an object-lesson is presented to the people in a unique way, and the stage is put to a most wholesome use. Actors are called together, the conditions of the locality studied and the cause of the epidemic fathomed. The troop at once go to the theater and prepare to give a free performance to the town and country people, who gather in great numbers.

If the swift destroyer chance to be cholera all the conditions that produce the disease are faithfully enacted by these public benefactors. Various concoctions are taken freely; half-cooked vegetables, green fruits and unsavory, unwholesome viands are disposed of at a rate most appalling to the spectator. In order to make it all most realistic the scene is set in one of the ordinary homes of the common people amid all sorts of unsanitary arrangements put into full and free use for the occasion. The thrilling time begins as these numerous devices take effect. The agony of the cholera victim is so vividly depicted in groans and moans, with movements suited to each new pang and intensified by horrible grimaces, that the entire audience is almost thrown into convulsions of fear and terror as they contemplate the approach of so grim a monster. The climax is reached when, after floundering about for a time, the hapless victim is supposed to feel the clutches of the last enemy and in a fearfully real portrayal succumbs to the effect of all this disorder. The lesson is a useful one, for the entire audience straightway set about removing the cause and frequently thus avert calamity.



HOW MAN AND BEAST ARE SHOD WITH STRAW

STRANGE BURIAL CUSTOMS

Many are the customs of disposing of the dead and the manner of preparing them for a final exit from the earth. The usual form is to place the remains in a square box, larger or smaller as the case requires, but at any rate the size never admits of more than room for a sitting posture very similar to that assumed in life—that is, they are placed upon their knees, the body thrown back upon the heels and the head pressed forward from the shoulders. This is not confined to class or clan, to wealth or poverty, but is common and usually considered the proper thing. In the section of the country where Christianity was first planted, with it they evidently introduced the foreign custom of long coffins, for to the present day they retain that form. It is doubtless due to the fact that two hundred and fifty years of persecution failed to crush out "the despised sect and the forbidden faith," and this relic of early teaching survived the attempts. It is a fact that in this section alone the long coffin is used and the dead are stretched at full length in their last sleep. In all other parts, with this one exception, the many sects have adopted a uniform shape and kind of receptacle for the remains. Because of the antiquity of the country it is impossible to trace customs to their origin or to fathom the cause of their adoption. All that can be learned is, "Our fathers did so; they never had any other way." This explanation must serve as sufficient reason for perpetuating any custom, no matter how barbaric or absurd, and we must be satisfied with that reason for the custom of which I now write.

Instead of placing the remains in the square box at once they are first placed in an open jar. This is large and flaring at the top, but decreases in circumference toward the bottom, where it terminates in a diameter less than that of a water-pail. Just how the remains are made to fit the peculiar shape it is impossible to say, for this had already been done before I arrived at the house, and the jar was covered with a wooden arrangement very like a barrel-head. The jar was placed in the square coffin and then consigned to Mother Earth. The priest was unable to give me any information other than that it was a custom which had always prevailed in those parts; "their ancestors had always done it" seemed a sufficient reason. The members of the family said only "custom," and this is all that can be learned of the gruesome practice.

[CONCLUDED ON PAGE 18]

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IN HIS annual message Governor Nash calls attention to the fact that the Ohio Agricultural Experiment Station is the only institution in the state of whose governing board the Governor of the state and the chief executive officer of the institution are members, and recommends that the law be so changed that the station shall be under a board of control of whom neither the Governor nor the director of the station shall be members.

Experience has shown that this is the wiser arrangement, for not only is it practically impossible for the Governor to give that close attention to the work of any particular institution which is necessary to taking an intelligent part in its management, but the very fact of the close association involved in membership in a board of his own appointment is sometimes an embarrassment when the interests of the institution require a change in the personnel of the board.

Regarding the impropriety of the director's membership in the board the case is even stronger. He is the chief executive officer of the station, selected because of special qualifications for the work in hand, and such an officer must have full control over all the affairs of the institution if he is to administer it successfully. If he is a member of the board with the privilege of voting there is danger of the assumption that other members of the board should have equal authority with him in the internal management of the station, an assumption certain to cause trouble.

The Ohio Experiment Station has had great prosperity under the existing law; but it has reached a period of its development when a change in the law is necessary to enable it to occupy successfully the larger field of work which lies before it.

A bill to effect the desired change, which has the approval of Governor Nash and the friends of the station, has been introduced in the state legislature. Its main provisions are:

Sec. 409-2. The government of said experiment station shall be vested in a board of control, consisting of five members, not more than three of whom shall belong to the same political party, who shall be appointed by the Governor, by and with the advice and consent of the Senate, and whose term of office shall be for five years, except that those first appointed under this act shall hold office for one, two, three, four and five years respectively, the terms to be fixed by the Governor in their commissions. In case a vacancy shall occur in the board an appointment shall be made for the unexpired term. The members of the board of control shall be paid their necessary expenses while engaged in the discharge of their official duties, but they shall not receive compensation for their services.

Sec. 409-4. The board of control of said experiment station is hereby constituted a body corporate, with the power of sueing and being sued, of contracting and being contracted with, and of making and using a common seal and of altering the same at pleasure; they shall have the power to receive and hold in trust, for the use and benefit of said station, any grant or devise of land, and any donation or bequest of money or personal property, to be applied to the general or special use of the station, as may be directed by the donor; they shall appoint a director of the station, who shall be a person of acknowledged ability and training in the principles and practice of scientific agriculture; they shall adopt by-laws, rules and regulations for the government of the station; they shall fix the salaries and terms of office of all officers and employes of the station; and they shall have power to remove at any time for cause, sustained by written charges, any officer or employe of the station.

Sec. 409-5. The director shall have control of the affairs of the station in all its departments, and shall be responsible to the board of control for the efficient management thereof; with the approval of the board of control he shall appoint such chiefs of departments, assistants and other employes as may be necessary for the proper management of the station, and shall assign them to their respective duties. The director shall have authority to suspend any officer or employe of the station for cause, he at once to report the same, with reasons therefor, to the board of control for final action.

IN A recent number of "Harper's" W. D. Howells writes of the "Common Man" as follows:

"If we recall the names of the Presidents who followed Jefferson, we shall realize how fully they illustrated the ideal common man, with now and then an instance in which they exalted it far above the ideal of any gentle man, except Washington. They were strong men, men of potent will, and whatever their errors, men of a high purpose as any of the men of gentler tradition who went before them. If we think of Jackson, of Lincoln, of Grant, of Garfield, of McKinley, whose beginnings were all as common as those of the average American now earning his living by the labor of his hands, we must own that they were, in statesmanship at least, the equals of those Presidents—Pierce and Buchanan and Hayes and the two Harrisons and Taylor and Polk—whose beginnings were less humble; and it would not be too hardy to say that they were the equals of those earlier Presidents—Monroe and Madison and the second Adams, who antedated Jackson—and were of the older tradition of the gentle man, by origin, by education and by social position. If the claim of the common man to be as sovereign in the republic as the gentle man needed vindication, the chief magistrates who were most distinctly of his order most triumphantly vindicated it. They stamped Americanism with his image and superscription, whether ineffaceably or not we may not know in centuries; but their great lives hallowed the notion of humility of origin and condition in the hearts of most Americans as something humanly dear and sweet, as something divinely sacred."

IN AN article in the "North American Review" for January on the "Political Aspects of Cuba's Economic Distress," Hon. Josiah Quincy says:

"The close connection under modern conditions between economics and politics has rarely been more strikingly illustrated than by the present phase of the Cuban question. For three years our representatives have been dealing with the island from a political standpoint, assuming that good government would bring with it the stability and prosperity essential to make Cuban independence even a hopeful experiment. They have only recently discovered that economic conditions and relations are of more fundamental importance than administrative improvements—that tariffs made at Washington have an even more vital connection with the future of Cuba than constitutions framed at Havana.

"But, as anything beyond temporary relief at the best is apparently out of the question pending the establishment of the Cuban government, we may well look ahead to the real issue which underlies the whole situation—the issue which may have to be ignored officially on both sides for a short time longer, but which is none the less the crux of the whole matter. As the economic question in Cuba, dependent upon her external relations, is now seen to be of even greater importance than the political question of her internal government, so this issue is, in turn, swallowed up in—because it is included by—the larger political question of the annexation of the island to the United States. With her incorporation into this country with the full rights of a state or of an organized territory—including, of course, the right of freedom of trade within the limits of the Union—the economic question would be settled for Cuba, completely and finally. Any other settlement must be partial and temporary.

"The present situation at Washington indicates that it may be necessary, a little later, for Cuba to play her last card by asking for annexation before she can win the rich economic stakes for which she is contending. Peace, plenty and happiness are the real objects sought by her people; her form of government, whether independent in the fullest sense or only within the wide limits allowed to a state of our union—whether flying its own flag or under the stars and stripes—is only a means to those ends. If they can better be attained—and this can hardly admit of doubt—by the freedom of trade with this country which annexation, and nothing short of annexation, will bring—by the confidence which this will give to capital and the stimulus which it will offer to immigration—then Cuba should be wise and enlightened enough to grasp the substance of prosperity and liberty as an autonomous state, rather than cling to the shadow of national independence at the sacrifice of all her material interests.

"How, then, is political union, so desirable both from a Cuban and from an American standpoint, to come about? It can now come only after the establishment of a Cuban government; and it is, doubtless, desirable from a sentimental standpoint that such a government should be inaugurated, however short its life may be, as well as necessary from a practical standpoint that all due forms of negotiation should be gone through before the consummation is reached. We should do everything in our power to regard the sensibilities of the weaker party in effecting this union, and to respect that sentiment in favor of a free Cuba for which her sons have sacrificed so much. We should allow Cuba to reach the conclusion that annexation is best for her in her own time and in her own way, provided that the law and order for which we shall still be responsible be maintained in the meantime. But if we, from our side, and regarding our own interests, believe that voluntary annexation is the only satisfactory and permanent solution of the problem which has vexed our statesmanship for generations, there is no reason why we should grant as a permanent and free gift, to a quasi-independent Cuba, those commercial advantages which would constitute one of her chief inducements for seeking political incorporation with us."

Current Agricultural News and Notes

The leading cranberry states east of the "Rockies" are Massachusetts, New Jersey and Wisconsin. Oregon on the Pacific coast, has three cranberry producing counties, and Washington is reported as having at least two.

In counting the cost of production the extent to which the crop exhausts the soil should be considered. A crop of flaxseed, for instance, makes a much greater drain upon the elements of fertility than one of wheat, corn or other ordinary farm crops.

The extent of the asparagus growing and canning industry in California is shown by the fact that at Los Angeles a company of capitalists has recently purchased sixty-three hundred acres of land to be exclusively devoted to asparagus-raising.

The question of catch crops is a most important one. As soon as it became apparent to the farmers in southern Illinois that the corn crop would prove a failure on account of the drought, they planted cow-peas and secured a yield of fifteen to twenty bushels to the acre.

Forestry may be briefly defined as follows: Protection of timber lands from destructive fires, restricting the cutting of timber to trees of a certain diameter, protection of the young growth, judicious thinning, and the planting of seeds and cuttings.

Modern farming requires in all departments a higher training than has been required in the past. Every progressive farmer now realizes that more scientific knowledge respecting the underlying principles of his occupation is an essential element of success.

The first shipment of prunes from California was made from San Jose in 1867, by J. Q. A. Ballou. It consisted of only five hundred pounds, that being the total production at that time. The output during the past year in that state was 737,349 pounds.

Sixty-four thousand acres are now devoted to the cultivation of the raisin-grape in California. The city of Fresno is known as the "Raisin City." Eight months of sunshine and plenty of water for irrigating purposes accounts for the success of this growing industry. The packing-houses furnish employment to over five hundred laborers.

There is a growing demand for sub-experiment stations in several states. It is reported that a wheat experiment station has been established in Texas near San Antonio. The idea is a good one. Practical demonstrations have more weight with the majority of farmers than mere theories, and those who live close to an experiment station have a decided advantage over those who do not.

The Department of Agriculture is authority for the statement that not less than twenty millions of dollars' worth of imported fibers are converted into manufactured products in this country. This amount could be much increased, and it is easily possible to grow in this country at least as much fiber as we are now importing.

Experiment station work in the line of more systemized feeding of live stock ought to receive the hearty commendation of American farmers. Our most advanced agriculturists agree that it is a mistake to export an undue proportion of cereals instead of converting them into beef, pork and mutton.

The preliminary report of the last census shows that in Rhode Island there has been a gradual decrease in the quantity of grain produced, and a proportionate increase of the products of the dairy, the poultry-yard, small fruits, and general market-gardening. A much greater income is being derived at present from the same acreage than was formerly.

The farmers in northwestern Kansas have a reliable "mortgage-lifter" in alfalfa. It is now conceded that wheat and alfalfa are almost certain crops, so much so that they are to be absolutely depended on as a reliable source of income. Other crops with very few, if any, exceptions are more liable to fail than these.

The main reason why more care should be taken in the preservation of corn fodder, too much of which is allowed to go to waste, is that the stalks, leaves and husks constitute about forty per cent, or nearly one half, of the nutritive value of the plant. W. M. R.

RURAL AFFAIRS

Mice Girdling Fruit-trees It is a good many years since I had the last lot of young fruit-trees girdled and most of them utterly ruined by mice. Such mischief is easily preventable. In fact, the really progressive fruit-grower of the present day will seldom have reason to complain of injury to young trees by mice. Clean cultivation gives to the mice no chance. It is the tree in sod, in weeds, in neglect and the tree with a lot of coarse manure piled up around its stem which is in danger of being attacked by mice. If the young trees are handled right—namely, the ground kept entirely bare in fall and winter, and even the snow after every snow-storm tramped down around its stem—mice will not girdle them. Mice only work under cover. But why have mice in the fields, and meadows and orchards? They have many natural enemies, such as hawks, owls, weasels, crows, etc.; but if these are not sufficient to keep the number of mice down to a very small figure, we can easily get a good cat or two to assist. Keep the cats in the barn, where they can run out or in at pleasure. Give them nothing much to eat except milk (we only give ours skim-milk), and no great quantity of that, and let them hunt for their meat. It is true, cats will also hunt birds. We have one which is a skilful hunter of pigeons. She might have taken English sparrows without danger of having me object, although I am more friendly disposed to that much-maligned bird than many other people, but to see that cat sneak up to where the pigeons were being fed and make a successful spring upon the nearest of the birds, then carry it off under the barn or into a thicket of evergreens to be feasted on at leisure, was more than I could stand. A charge of dust-shot forwarded from the muzzle of a Flobert gun at rather close range, and directed upon the cat's hindquarters, just as she was trying one of her springs on a pigeon, has just about cured her of that trick. Yet we can well afford to give her a bird now and then as a reward for splendid services in keeping the premises free from rats and mice. There is, however, a great difference in cats. Try to get one that is a good hunter. If she should bring up kittens, she will teach them how to hunt and get them used to catching rats nearly as big as themselves.

No cat in the house for me, however, to be a useless and in a measure a dangerous pet for the children. Cats are supposed to be liable to carry infectious diseases. Whether there is much risk or not, my appetite is better when there are no animals of any kind in the kitchen and dining-room. To keep the dwelling free from mice and rats is therefore a task for myself or some other member of the family. If it is the only alternative I would rather have a little mouse or a small rat in the house than a big nasty cat. But we can usually manage to get rid of the undesirable little rodents. No trap ever invented works more promptly and more satisfactorily than the common figure 4 (so-called). I have just caught the last of a colony of six good-sized mice, which for a few weeks had infested the pantry, in one of these dead-fall traps. The first five fell victims to their fondness for pumpkin-seeds in five successive nights. We had to keep the trap set four or five nights for the last one, but the animal's appetite finally overcome its suspicion aroused by the fate of its mates. One big rat, which we had in the cellar, however, utterly refused to go into a trap of the same kind but larger in size. It readily entered a box containing winter eggs (coated over with vaseline and packed in bran) after having enlarged, by gnawing, a small hole near the bottom. I put another open box, containing some bran in its place, and in this placed an ear of corn every night for several weeks until the rat had lost all suspicion and fear. Then I put a hinged cover on the box, and had this raised up and held up by means of a little stick and an ear of corn in such a manner that it would fall down when the rat worked much at the corn. I had the old, shrewd rat before I went to bed that night. It is only a matter of skilful baiting, some patience and a little ingenuity.

Country Life Never have I found more genuine pleasure and inspiration anywhere than in the close contact with and study of Nature, which is only part of the many privileges and opportunities of people occupied in rural pursuits. I have often enthusiastically sung the praises of country life and the vocation of farmer and gardener. The recent quotation in FARM AND FIRESIDE from Ashes and Incense" hits my case exactly. To be relieved from the "curse of toil" is not my prayer:

"But give me
Time to fight the battle as best I may;
And give me
Strength and place to labor still at evening's gray;
Then let me
Sleep as one who toiled afield through all the day."

I hope that I shall be permitted to "die in harness." As soon as the infirmities of old age shall prevent me from toiling, from taking an active interest in the affairs of the world or from being useful to others around me, I shall fervently wish to be taken hence. I shall be ready to go without fear or hesitation, and even without thankless speculation about the particulars of what that unknown future will bring. For these reasons I have never had any burning desire to "be rich." My own standing in life has always appeared to me much more desirable, my own enjoyment of life so much greater and purer than the standing and enjoyment of our noted millionaires that I would not have consented to a change of position with any one of them. Mr. Rockefeller, with an annual income of $30,000,000, is reported to have been unable to eat a hearty meal since 1891. "Tepid skim-milk and crackers constitute his supper, and he does not dare to vary his diet."

The Rich and the Poor A writer in a Buffalo evening paper attempts to show that the advantages of the rich men, our well-known millionaires, are more imaginary than real. "What fun would your wife have in going bargain-hunting," he asks, "if she had $50,000 in her purse? Shopping would soon lose its attractions under such conditions. The poor widow, who lays out a dollar for a few candies and little toys for her children's Christmas, has a keener pleasure than the millionaire's wife, who orders what she pleases and has the bill 'charged.' And the delight of the poor woman's little ones at the receipt of the gifts is greater than that of the millionaire's children, who, pampered and indulged, are prone to regard every day as a sort of Christmas." It is undoubtedly true that the average man, who has acquired (not inherited) his own millions, has wrecked his constitution in their acquisition. "He cannot enjoy those pleasures which he may purchase. He would like to eat buckwheat cakes and maple syrup, and drink coffee for breakfast, but he does not dare to. He must eschew the Christmas turkey and the plum-pudding and the preserved fruits, and the oyster stew, and all those delicious dishes which the poor man, with robust appetite, so well enjoys when he feels he can afford a little 'spread.' The rich man, if he indulges in a hearty supper, must lie sleepless through the night. On the other hand, the sleep of the laboring man is sweet. Neither his digestion nor his conscience trouble him. He does not fear the insidious approach of dyspepsia, or appendicitis, or paresis or other terrors which beset the rich man's imagination. His outlook is not warped by cynicism unless foolishly, he spends his time envying his wealthy neighbor. On the whole, the poor man lives a healthier, and consequently a longer life than the millionaire. His limited means may restrain the form and variety of the pleasures in which he may indulge, but what he does have he enjoys with a zest unknown to the jaded man of many affairs. Taken all in all, the acquisition of great wealth is not a matter which should arouse the enthusiasm of every one. There are few persons who may enjoy it rightly."

T. GREINER.

SALIENT FARM NOTES

Corn Culture Several inquirers have asked me to tell more about the methods of preparing corn-land practised by the farmer I wrote about last November. I had another chat with him and he said there was not much more to tell. He has four horses, and instead of allowing one to rest while he plows with the other three he uses all four and prepares the land for planting as he goes along. During the winter the stalks of the corn that was husked in the field are pastured down so that there is but little left when plowing time comes in spring. In plowing he uses a sixteen-inch sulky-plow drawn by three of his horses. The fourth horse is hitched to a half-harrow and is led along in the furrow behind the plow. The harrow breaks up the soil turned by the plow and also pulls the standing stalks down in the direction the plow runs, so that they are all turned clean under. Instead of "killing two birds with one stone" he kills three. He pulls the stalks down, plows the land, and harrows it all at one time.

I have seen two men preparing land for corn and using five horses, and they accomplished no more than this man does with three. One of the men harrowed down the stalks on a strip of land, then went back and harrowed the land that was plowed. Then I have seen a man with a sulky-plow and three horses, and a boy with a walking-plow and two horses, plow two or three days, then go back, and while the boy harrowed the man would plant, and in the end they accomplished but little more than the one man with his four horses. This man told me that he had, when the soil was in just the best condition for planting, hitched the half-harrow to his sulky-plow, while a hired man with the other horse and a hired one kept the planting close up.

There are short spells in almost every spring when the soil turns over in splendid condition and can be pulverized nicely with a single harrowing; it is in just the right condition for working, and if one can get it prepared and planted while in that condition he is almost sure of a good stand, providing his seed is good, and the plants are sure of a strong start. After the corn is planted the farmer above mentioned begins to harrow, first with the teeth straight, then with them slanting backward, and keeps going until the plants appear. Then nothing more is done until the plants are high enough to permit of rapid cultivation.

He tells me that ever since he adopted the method of preparing the land and constant harrowing until the plants appeared, which he now practises, he has had no trouble with either weeds or grass in his corn. The soil is clean when the plants come up and they invariably get a good start ahead of both weeds and grass that may appear after the harrowing ceases. He does not believe in harrowing after the corn is up, because so many of the plants are destroyed. If no more than two hundred plants on an acre are uprooted there are at least two bushels gone, and he has found that far oftener five to six hundred plants on an acre destroyed. He says, "Keep the soil loose and clean until the corn comes up, then cultivation may be delayed until it can be done rapidly and easily."

Shredded Fodder Several years ago I said that corn-stalk shredders were a grand invention for farmers, and that their use would increase until they were as common as threshing-machines. Also that shredded fodder would, in time, be more largely used on the farm than hay, especially for feeding cattle and sheep. I was laughed at and called a crank. To-day the men who laughed the loudest and poked the most fun at me are shredding corn fodder, and are as careful of it as of the best hay. When the shredder first came men stacked the shredded fodder like straw from a threshing-machine and let the stock run to it like straw. Of course it got wet, heated and spoiled. Shredding was voted a miserable failure. But careful farmers shredded the fodder when it was dry and ran it into their haymows where it would keep dry and they decided that shredded fodder was as good as timothy hay for feed.

FRED GRUNDY.

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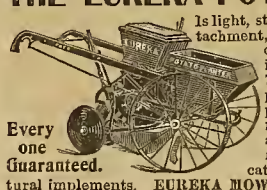

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OUR FARM

Farm Theory and Practice

Seed Potatoes.—There may be difficulty in securing good potatoes for planting in the spring. One cannot tell how much the rot reduced the supply, but the loss was heavy. There is always a considerable percentage of farmers who chase the markets, coming in one year late and planting heavily of whatever crop is high in price at planting-time, and there may be some increased demand on this account. On the other hand, there is reason to believe that an unusual percentage of the potato crop went into storage last fall, the prevalent belief being that prices would be very high next spring. The imports from foreign countries have been uuexpectedly large keepiug the price in seaboard cities within bounds. The crop of second-crop seed in portions of the South was good, and it will be on the market for planting. It is a difficult matter to forecast the future of the market, and I am sure predictious this year are guesswork to an unusual degree.

Using Culls.—When seed potatoes are high, the temptation is to use culls for planting. In a very rich soil a weak plant can be nursed along and made to yield well—no doubt of it—but I am sure that it is poor economy to use poor seed. In potato growing, a stand of strong plants is half the battle. It is best to put up the money necessary to get choice seed for a crop that requires the labor and expense that must be put upon the care of a potato field.

As the potato thrives best in a cold latitude, my preference is for Northern seed, or else for the Southern second-crop that makes its growth in the late fall. An early-matured crop in a warm latitude does not make good seed for another year. The heat has reduced the vitality, and the material in the cells feeding the sprout is ready to make growth, and the potato cannot be kept from sprouting too early in the season. Seed from the North or a very late crop farther south, is surest of giving good returns, and if it will pay to plant potatoes at all next spring, it will pay to get the best seed. The chances are that a big acreage of early varieties will be planted if the seed can be gotten. For such varieties a richer soil is required than for later varieties. It is poor policy to plant the early varieties in a soil that is not very fertile. Such varieties, as a rule, are more subject to the early blight than some of the medium or late varieties, and growth should be forced. Then, too, an early crop should be very early to get the best market, and fertility aids. It is also true that the plant-food becomes most rapidly available in hot weather, and an early crop gets the least advantage from this source.

Oats and Peas.—The high price of feed causes us to plan for rich feeding-stuff for next summer. North of the fortieth parallel of latitude, oats and peas may be made to furuish forage, and this crop becomes the first one for spring planting. I do not say that this crop may not pay farther south in some seasons, but it does not stand heat well. The seeding should be done as early as possible. The peas—not the southern cow-pea, of course, but the Canada pea, which is a true pea and delights in the cold—should be drilled in deeply. A heavy log chain on the hoes of a grain drill will help to bury the seed. Three to four inches is a good depth. Then the oats should be drilled in the usual depth. For forage make the seeding heavy. Six pecks of peas, and six pecks of oats make none too heavy seeding. Some growers use two bushels of oats. This makes rich feed, enabling one to cut down the grain ration, but it is at its best only for a short time. Begin cutting when the oats are in the milk, aud the peas are forming pods, feeding the forage green. Within a few days the crop is at its very best, and must be harvested soon if wanted for hay.

Seeding to Clover.—Why not divide the clover seed, and make two seedings of the grouud. There is enough seed in half the quantity commonly used to give a full stand of plants if all lived. But there is some danger of loss by a freeze where very early seeding is done, and there is more danger from drought in July and August when the seeding is late. It is a good plan to sow half the seed on the fields when the surface is checkered by frost, and before all frost is past. The seed will thus be covered, and the plants will be early. I believe such early seeding is the surest, the plants being better rooted when drought comes after harvest. But a later seeding may do best—is best some years—and therefore I like to divide the quantity of seed to be used, applying half in late winter or early spring, and half when all danger of a freeze is past.

The Choicest Seed.—In extra recleaned seed every graiu should germinate and make a strong plant if it is in a favorable location. In the average grade on the market there is a considerable percentage of seed that cannot make strong plants even if it germinates at all. A dollar's worth of the best and costliest seed an acre is preferable to a dollar's worth of medium or low-grade seed. The strong vitality and the absence of weed seeds combine to make the best seed the cheapest in the long run. Some dealers will not keep the best grade because they do not want the reputation of being high-priced, and if they offer common stuff and the best, customers compare the two and become dissatisfied with the quality of the cheaper seed while unwilling to pay the fancy price for the choice grade. Economize in quantity of seed au acre rather than in quality.

Medium Red Clover.—We can save some grain this summer by feeding clover just as soon as the first heads appear. When in full bloom, and no later, the clover can be made into hay rich enough to displace much grain. The clover can be made into hay more easily when it approaches maturity, but the hay will not approximate grain so closely in composition. There will be more woody fiber and bulk and there will be less nutritiou in a given weight.

David.

The "All-round" Farmer

I believe in him, this well-built, "all-round" farmer. In my humble opiuion he is the bone and sinew of this country. Speaking with all due respect to the great bonanza farmer of the Western prairies, and giving him all the credit due him, I still believe the general farmer holds the palm for real success in the United States to-day. Why?

When a great drought strikes the couutry who is in sorest trouble? The man who has all his land in wheat or coru. The failure leaves him strauded. A cry of distress goes up from him. His season's work has been swept away. The man who plants his farm to potatoes or beans or any one crop feels the stress of failure far more thau the one who has fields devoted to the culture of a number of kiuds of crops. If the potatoes fail he still has somethiug else to fall back on.

There is another view to take of this matter. The small farmer is able to give his crops better attention thau the one who has everything invested in one kind of grain or vegetable. The work does not come along all at one season. There is a gradual approach to the time of harvest. By the time one crop is out of the way another comes on. The same way about harvesting. One crop may be cared for before another begins to crowd. The result of this is more thorough cultivation, farms are kept in better state of tilth, and there are more satisfactory returns all around.

Then, too, it not infrequently occurs that one crop may be produced at a loss. The price for the season may be so low that after the cost of production has been reckoned up there is little or nothing left for the farmer. Here the general farmer has his neighbor at a decided advantage. It is very seldom, indeed, that every farm commodity it at a low ebb in the market. When corn is low, potatoes may bring a good price; or hay or wheat may be selling well; there may be some stock to turn off or wool may be "up;" pork may be "doing well" or fruit may be at a paying figure. Somethiug is comiug in from all these sources, whereas the specialist must either buy what he needs outside of his

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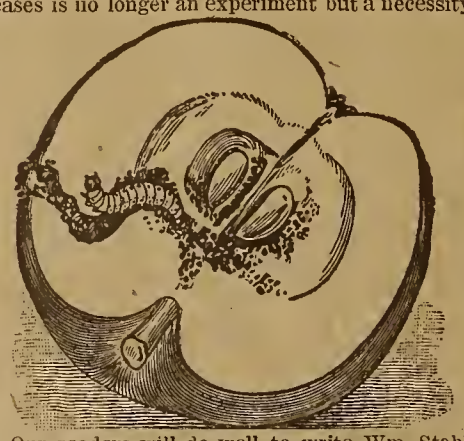

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Write for full details. For the garden, farm, poultry house, barn, orchard, etc. Self-operating. You hold the hose—the Sprayer does the work. Exterminates Insects from Vegetables, Sprays Trees, Showers Gardens, Washes Carriages, Cleans Windows. Our new
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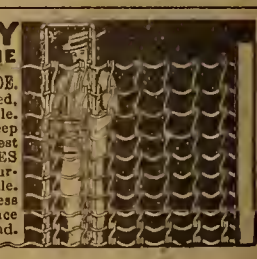

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particular line or wait for another season to roll round and bring it to him.

But perhaps the best part of general farming is to be found in the fact that it brings to him who engages in it an all-round development which cannot be gained in any other way. It is worth something to a man to understand the up-to-date methods of growing all that the diversified soils and climates of the country are able to produce. The capabilities of farming are constantly becoming greater. They are also changing from year to year. It is only a comparatively little while ago that the silo, for instance, came into existence. We have found that we can no longer depend entirely upon our meadows for food for our cattle. Changing conditions have brought about a change in the possibilities of raising grass. It is no small task to understaud how to properly grow, care for and use a great field of silo corn. A different kind of knowledge is required to grow potatoes or fruit successfully. Dairying also calls into play still another set of faculties. Of this the specialist knows comparatively nothing. He knows how to grow one particular kind of crop, but of the wider education which general farming requires he knows comparatively nothing. And this broader knowledge the times demand of him who desires success in its true sense.

There is a satisfaction in seeing the variety of crops growing on the farm devoted to general farming which does not attach to special farming. The fields of corn verging toward maturity harmonize pleasantly with the waving oat or wheat fields. The acres in potatoes, fresh in their coats of green, give variety, while the orchards, bending under their weight of fruit, form a most enchanting picture. And this cultivation of the sense of beauty and the effect thus produced on the heart of him who has had a hand in sowing and cultivating the crops, is by no means to be passed by lightly. For it is not all of life to live and make money. The culture of the heart which ought to go with the tilling of the soil is in many ways most valuable of all.

Young people on the farm are very susceptible to influences which do not affect those of older years. Their future is largely determined by the impressions of youth. It cannot be questioned that the beauties of the farm devoted to general farming have a marked influence upon the heart. They have a tendency to wean away from, or produce an attachment for, the country and its life. It seems to me this should not be overlooked. The farm ought to be so attractive that our boys and girls would love it and be drawn toward it as a home for all their lives. Then the shop and the factory would lose their supreme charms. We would have the help and comfort of our children as we come up to old age. Life would then be less a thing to be dreaded than it is now when we look forward to gray hairs alone on the farm.

So we plead for the general farmer.

EDGAR L. VINCENT.

A Thoroughly Prepared Seed-bed

What do we mean by a thoroughly prepared seed-bed? First, the thorough pulverization of the soil to a proper depth. What depth that may be depends on the nature of the soil itself. Six inches would be rather shallow in some sections aud four inches would be deep enough in others. To thoroughly pulverize the soil is the proper work of the plow, and whether the plowing be deep or shallow, the more thoroughly the portion turned is pulverized the better it will be. The object of this pulverization is to give the rootlets of the plants an opportunity to anchor themselves in the soil and get the abundant nutriment necessary for the full development of the plant. The little rootlet cannot get any good out of a clod, nor can it reach over across the space between clods. It must have food for every one thousandth part of an inch of its length, and must have that readily available; hence, the necessity of such a thorough and minute pulverization of the soil as will not only bring it into close contact with the roots, but will increase its water-holding capacity.

The water is found in a film around each minute particle, and the more particles there are—that is, the finer the soil has been pulverized—the more films of water and the more water in the soil. . . . . The first condition, therefore, is a thorough pulverization of the soil.

The next characteristic of a good seed-bed is close contact of the turned furrow with the subsoil beneath. Why? Because no furrow-slice, however thoroughly comminuted, can hold anything like the amount of water necessary for the plants that grow in it; hence, it must be in close mechanical contact with the subsoil in order that water may be pumped up from below by capillary action and thus be made available for the plant. To plow a field and then let it lie without subsequent pulverization and impaction to make this connection with the subsoil below is simply to dry it out. The lump cannot hold water, the air has free access to it, the beatiug rains form a crust on top, and the result is a waste of moisture instead of conservation and the drying out of plants because water cannot be pumped up from below.

The third thing uecessary is the mulch of dry dirt on top. Why? Because this mulch of dry dirt prevents the evaporation of the water pumped up into the lower furrow-slice. It acts just like a mulch of straw or leaves, shutting off evaporation and enabling the plant to use much the larger portion of it. There will be some evaporation, but when there is good capillary action below and evaporation is reduced to the minimum, it is a very dry time indeed in which a full crop cannot be grown. A beating rain, formiug a crust and thus restoring capillary action at the top, wastes the water below and injures any crop that may be grown on that land.

This explains the benefit of harrowing winter wheat or rye in the spring, which should always be sown in drills in order that it can be harrowed, thus breaking up the crust, destroying weeds, and conserving soil moisture. It also gives the reason why corn-stalk ground disked as early in the spring as possible afterwards breaks up mellow with plenty of moisture, while if left undisked it breaks up cloddy. It explains why corn that is continuously harrowed during a dry season maintains its green color and continues its growth, while if not continuously cultivated it shrivels up in the daytime and fails to recover as fully as it should during the night.—Wallace's Farmer.

Feeding Wheat

The best form in which to feed wheat is to roll or grind it into a coarse meal. It may then be fed alone, or mixed with corn-meal or ground oats. When ground fine it is pasty and adheres to the teeth, gums and cheeks so that it is not so readily masticated or eaten. In the form of a coarse meal it is relished by all animals. It is in a condition to be attacked by the digestive processes whether thoroughly masticated or not, aud in most cases it gives the best results. Dr. Gilbert appears to have obtained better results from whole than from ground wheat when fed to sheep.—Kansas Experiment Station.

Correspondence

FROM TENNESSEE.—I have lived here about twelve years, and never had a failure in crops. The soil is of red clay and well productive. There are a few well-improved farms of from 110 to 270 acres for sale at fair prices. There are about one hundred Northern families here. The county-seat is Winchester with a population of 2,000. T. J. K.

Winchester, Franklin County, Tenn.

FROM VIRGINIA.—Midland is fifty miles southwest of Washington, D. C., in Fanquier County, which is famous for its fine horses and cattle. The northern part is hilly and adapted to blue-grass, the southern is level. We raise all kinds of grain, grass and fruits here. Our crops are never so large as in some other places, but crop failure is unknown and markets are always good. This part of Virginia was settled very early. An old mill near here, dated on the stone 1712, still grinds corn for the people. We came here from Illinois fifteen years ago for health and found it, and also a much better country than we expected. We generally do our plowing in winter. Corn planting lasts from April 15th to June 10th; wheat sowing, September 10th to November 10th. We need not hurry as much as in some other places, but we don't advise a lazy man to come here to get rich. We have too many lazy farmers here now. I have been reading the FARM AND FIRESIDE for sixteen years and call it good. B. B. S.

Midland, Va.

SALZER'S SEEDS

Beardless Barley is prodigally prolific, yielding in 1901 for Mr. Wells, Orleans Co., New York, 109 bushels per acre. Does well everywhere. **That pays.**

20th Century Oats. The oat marvel, producing from 200 to 300 bus. per acre. **Salzer's** Oats are warranted to produce great yields. The U. S. Ag. Dept. calls them the very best! **That pays.**

Three Eared Corn. 200 to 250 bus. per acre, is extremely profitable at present prices of corn. **Salzer's** seeds produce everywhere.

Marvel Wheat yielded in 30 States last year over 40 bus. per acre. We also have the celebrated **Macaroni Wheat,** which yielded on our farms 63 bus. per acre. **That pays.**

Speltz. Greatest cereal food on earth—80 bus. grain and 4 tons magnificent hay per acre. **That pays.**

Victoria Rape makes it possible to grow hogs, sheep and cattle at a cost of but 1c a lb. Marvelously prolific, does well everywhere. **That pays.**

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$10.00 for 10c. We wish you to try our great farm seeds, hence offer to send 10 farm seed samples, containing Thousand Headed Kale, Teosinte, Rape, Alfalfa, Speltz, etc. (fully worth $10.00 to get a start) together with our great catalog, for 10c postage.

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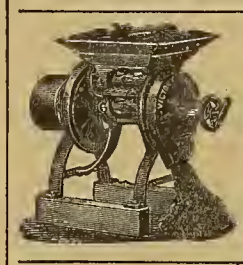

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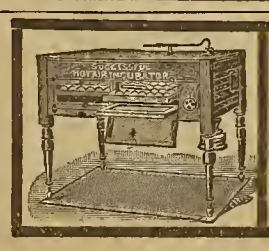

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Notes From Garden and Field

WHAT TO PLANT.—A reader in Ohio asks me to give in these columns a list of seeds that I intend to plant the coming season. For some years it has been my habit to give at this time of the year a review of the seed and nursery catalogues as they come to my table unsolicited, and to mention the newer things which they have on their list, giving my own experience concerning them as far as I had a chance to try them. This year I may content myself with giving a list of the good varieties, old or new, such as I am willing to plant for my own table and market. The same reader (E. J. G.) says: "I have been growing onions since the publication of the New Onion Culture with great pleasure and some profit, and am much indebted to you for your notice in the FARM AND FIRESIDE of that splendid onion, the Gibraltar. Without the FARM AND FIRESIDE I would not have known of its existence. I often find in its columns some article worth to me more than it costs for many years' subscription. I am now seventy-six years old, and my pride and pleasure in growing vegetables and fruits is only limited by my knowledge, which I am trying to increase by reading books and making experiments."

We are never getting too old to learn and take an interest and pride in useful occupations, especially those connected with rural life, so long as we have strength and health to do it. And the careful reader of any good farm and garden paper will always get abundant returns in many ways for the subscription price. It is a poor paper, indeed, that would not in one way or other pay a reader who is wise enough to profit by good suggestions ten dollars for every one dollar the paper costs him. Take this Gibraltar onion as an example. If our friend realizes even a fraction of the benefits from his knowledge of the existence of this onion that I myself get from it he would not be willing to exchange this knowledge of its existence for a crisp ten-dollar bill.

A SEED LIST.—If in this or following issues of the FARM AND FIRESIDE I should give a list of seeds such as I buy and plant it must be with the understanding that the reader will not be asked to adopt this list in every particular. We all have individual likes and dislikes. Tastes differ. Views differ. What suits one may not suit another. If you have any particular variety, which you have grown to your own satisfaction, and which you find valuable for your local or individual conditions, by all means hold on to that which is good. If you want a small onion, or your trade demands a strong onion—one which will bring the tears to your or your customers' eyes—I will not insist that you grow any of the large onions of the Spanish type. Plant the Danvers' Yellow for a yellow sort, or the Wethersfield for a red one, or the White Globe or the Silverskin for a white one. But if you wish to make a most interesting experiment, would like to have large bulbs in every way as sweet and mild as the imported Spanish, and attempt to grow the largest possible crop of onions on a given area then, I say, sow seed of the Prizetaker and Gibraltar onions for plants in a hotbed or on the greenhouse bench, and later on transplant the young seedlings in well-prepared soil in open ground. You will be pleased with the outcome. These onions are the one crop which have never yet failed to give me fair returns for the labor and trouble of raising them, and yet I have no land that can be called good onion soil. You can grow them successfully where your success with the ordinary onions, by the old method of growing them, would be quite insignificant. I wish to make this especially emphatic for the home grower. Most people are fond of the mild flavor and succulency of the Spanish onions. The store prices are usually high, as the domestic onions, Prizetaker and Gibraltar, are seldom to be found on sale and the imported Spanish bulbs cannot be sold at prices of ordinary onions. If you have a little spot, even if not more than a few square yards or rods, that you can devote to onions, by all means sow an ounce or half an ounce of Gibraltar or Prizetaker (or both), in an early hotbed, either broadcast or in rows or even in a box in a window, and try your luck. You will surely enjoy having those fine, large, sweet bulbs for your table during summer and fall.

In earlier years I have also regularly planted a good-sized patch of the Barletta pickling onion, the smallest member of the onion family here grown "for profit." But the profits have also dwindled down to Barletta size, or less. To grow these onions to advantage you want a nice, clean, sandy loam, or better, nearly clear sand. Last year I came down to one half pound of seed. The coming season I shall sow only one fourth of a pound, and leave it to others who have more suitable soil and a willingness to work for small profits to grow Barlettas or New Queen for the market. While cabbages draw more heavily on the plant-foods in the soil than any other garden crop that I know of—a heavy crop removing in the neighborhood of five hundred pounds of potash and several hundred pounds each of nitrogen and phosphoric acid from the soil—the onion crop, on the other hand, absorbs hardly much more than is taken up by a good yield of wheat. The object of the heavy manuring, which we usually give to the land for an onion crop, is more for the purpose of supplying humus, thereby increasing the moisture-holding power of the soil, than to supply needed plant-foods. But as we usually make the land so very rich when preparing it for onion growing I believe that even the heaviest yield of onions does not materially impoverish the soil, but will leave it in first-class condition for growing cabbages. For early cabbages seed should also be sown before long. In this locality, I usually do that along in February, preparing for this purpose, in the greenhouse, a bed of fibrous loam of only medium fertility. If new applications of plant-food materials have to be made to the soil intended for cabbage-plants I prefer to use wood-ashes and superphosphate, and, if necessary, a little nitrate of soda rather than organic manures or composts. T. GREINER.

Orchard and Small Fruits

CONDUCTED BY SAMUEL B. GREEN

Inquiries Answered

Red Cedar.—J. G. F., Rosendale, Mo. The evergreen branch with the small purple berries on it which you inclose is from the common red cedar, Juniperus Virginiana. The reason why all the trees do not have seeds is that the trees are staminate and pistillate, and only the pistillate trees bear seeds. This is perhaps the hardiest evergreen that we have, and is better adapted to the great variety of situations, perhaps, than another, since it grows well upon high, dry land equally as well as in rather moist soil.

Common Greenhouse Scale.—A. D., Peru, Ind. The leaf of oleander which you inclosed is infested with the common greenhouse scale. Tobacco water or in fact any of the insecticides commonly used will have no effect upon it, unless the scales are rubbed off. The best treatment for you to follow would be to get some whale-oil soap and apply to the leaves with a soft tooth-brush, which will tear off the scales. If that is inconvenient for you to get, use strong soap-suds for this purpose. You will probably have to repeat this operation at least once a year, but repeat as often as the scales become abundant.

Cover Crop in Orchards.—J. B., Cleveland, Ohio. I think that there will be little difference in the value of oats as a fertilizer whether you plow it in in the autumn or in the spring, and it certainly will afford some protection this winter and catch the snows, which would give it additional protecting quality. Oats are a very good crop to sow for this purpose of protection and I think are fully as good as rye, but not so good as Crimson clover, or in fact, any of the legumes. As you perhaps know agriculturalists sometimes divide crops into two classes, one class called nitrogen-gatherers, which includes all the legumes, such as clover, beans, etc., and the other nitrogen-consumers, such as the grains, grasses, etc. The first class of plants leaves the soil rich in plant-foods especially nitrogen and on that account plants belonging to this class are more desirable for green manuring; however, any crop that is grown on the land and plowed in will undoubtedly add plant-food to it, and rye and oats are valuable when used in this way. I have also used buckwheat for a catch crop in orchards, and find it very good wherever it makes a strong growth as it shades the ground.

Pecans—Grafting Seedling Peaches.—G. B., Hooppole, Ill. 1. The best way to start with pecans is to obtain seeds of the better sorts that can be found in your state. Mix the seed in sand over winter and plant out in the spring where they are to grow. It is possible to graft or bud the pecan, but it is seldom attempted, as the work is rather uncertain. These trees are not easily frozen out if on deep, rich, moist soil in southern Illinois. In northern Illinois they are rather out of their range, and of course are more liable to fail. 2. Seedling peaches can be grafted, and they are sometimes changed in this way at the South, but in the Northern states it is customary to do this by budding, which is more certain. This is done during August and September. Directions for this will be found in previous numbers of this paper. The same is true of grafting. You will find an article on root-grafting in the last number of the FARM AND FIRESIDE. They have been given annually for many years, and will be referred to at seasonable time next summer. You can get a good, well-illustrated treatise, "Amateur Fruit Growing," by sending fifty cents to Farm, Stock and Home Publishing Co., Minneapolis, Minn.

San Jose Scale.—F. S. W. 1. The twig you send is infested with San Jose scale. 2. California growers seem to get ahead of the San Jose scale by fumigating and using washes of various kinds. They have learned the science of the art of spraying thoroughly, which is something that we have not yet attained. The best way of treating the San Jose scale is yet a problem. Some of the very best results have been attained by spraying with crude petroleum, but in a recent discussion of this subject by the best entomologists at the Pan-American meeting in Buffalo, the matter was left in a very unsatisfactory state. If I had peach-trees that were infested in this way, I should spray them in the winter, when the weather is bright and clear so that oil will evaporate quickly, with crude petroleum. Professor Smith prefers to apply the crude petroleum clear, using only enough to wet the scales. The trunk and larger branches may be painted with it. Keep the oil in a warm place, say at sixty degrees, for some time before spraying, so it will spray readily. In applying it, use a vermorel or similar nozzle that will produce a fine, misty spray. While the results from this are sometimes injurious they are generally so very satisfactory that I should certainly risk it in a small way, so as to become familiar with the subject.

Sun-scald.—A. K., Minnesota.—Apple-trees may be sun-scalded at any age. I have known of small trees in the nursery being badly sun-scalded, although this is quite unusual. Some varieties sun-scald very much more easily than others. Where the sun-scald is but slight, the bark will not die, but will become rough on the outside and the wood will be somewhat discolored inside. In my experience, orchard trees should be protected from sun-scald from the time they are set out. Trees that are poorly established or weakened in any way are much more liable to sun-scald than those that are growing vigorously, and they are more liable to sun-scald after they begin to bear than before. As a remedy for sun-scald there will be some advantage derived from grafting a bud on the southwest side of the tree, so as to get a branch on that side that would shade the trunk. But a far better plan is to just incline the top of the tree to the southwest and in this way let the top of the tree protect the trunk from the direct rays of the sun. The objection to this latter plan is that the constant winds from the southwest in summer are liable to force the tree to the northeast, and trees that incline to the northeast have the sun's rays more direct on their trunks, being on this account much more liable to sun-scald than if they were inclined to the south or were erect. I would not recommend you to bud trees to protect them from sun-scald, but if you are setting one hundred trees, I would suggest that you protect them with a permanent lath screen, or else by corn-stalks tied on the southwest side before winter. The latter is the plan that is followed at the Minnesota Experiment Station, where the corn-stalks are put on in the autumn and after they are put on the trees are banked up a little around the collar. The stalks are all taken off in the spring and the land leveled off. A willow planted on the southwest side of each tree would protect, but is would grow much faster than the apple-tree, and would tend to injure it by taking away moisture, probably doing more harm than good. If you want to use something of this sort for a protection, I think the better way would be for you to plant buffalo-berry or June-berry in such places. I do not know of any currant-bush that I think would be satisfactory for this purpose. The best would probably be Red Dutch or the North Star, as these are very strong-growing sorts. The objection to boards around the tree is that they are liable to injure the bark when the tree is blown against them, but I do not think it is any harm to the tree to have the circulation of air away from the trunk.

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5 kinds of Best Beets, 10 of the Grandest Cabbages, 12 of the Choicest kinds of Lettuce, 6 of the Greatest Onions, 7 Grand New Tomatoes, 100 kinds of Gorgeous Flower Seeds, making in all 140 sorts, which will produce bushels of choice vegetables and immense quantities of lovely flowers, all for 12 cents and addresses of three friends who buy seeds and plants. Seed book free. Write to-day.
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YOUNG birds, as well as the old hens, often contract diseases, which they would escape were they kept in a proper yard, or allowed sometimes on a grass plot away from the barnyard; besides, they will be less liable to become overfat. In such a yard there should be two divisions—one for the laying and sitting hens and one for the hens with the chickens. Remove the hens and young ones into this latter yard as soon as they are hatched out. The hens should be confined in coops, so made as to protect them and their broods from the rain. The hens with chickens should be provided with an open shed in addition to these coops, facing the south, in which they might be placed during long-continued rains. Fresh water should be supplied in shallow troughs, twice a day, to the inmates of both departments of the yard, and there should be in each yard a small heap of ashes as a preventive of vermin. As the season for hatching will soon arrive, too much preparation in advance cannot be made.

Ducks and Early Laying

February is the time that ducks usually begin to lay, but sometimes, if carefully housed and cared for, they will begin earlier. The Pekins have been known to begin laying when only five months old, but eggs from such young birds do not hatch well. The eggs from ducks bring nearly double the price of hens' eggs in market, and as the duck will lay from one hundred to one hundred and twenty eggs in a year she is a very valuable fowl. Among the leading breeds of domestic ducks the Aylesburys are worthy of commendation. They are an improved English product, popular in their own country, and are fast gaining friends in this country. In them the farmer, cottager and fancier have a large bird for market or home use, and one that is remarkably hardy and productive. The Pekins are also well known, as they grow very rapidly. They sometimes weigh four pounds when eight weeks old, and Pekins have been known to gain one pound in weight per week each after arriving at the age of two months, but, of course, they do not grow rapidly after they are twelve weeks old.

Vigor and Hardiness

Farmers and poultrymen should make it a rule to look upon each hen as different from the others, and realize that some are valuable, while others are not, persistently destroying the weaker, and the damage and loss will then prove but a very small item compared with the gain in profit, showing also a saving of expense in favor of the strong, vigorous, hardy birds. It matters not, in starting a flock, of what breed or cross the hens may be, provided the male is pure-bred, for the male usually transmits his characteristics to all the chicks. A male should not only be from a hardy breed, but he should be known to the purchaser as having come from a vigorous family of that breed, and should himself be free from any signs of disease, or a tendency to contract disease. It is not always possible for a poultryman to select so wisely, but care in selecting is necessary, and will surely result in stamping out disease.

Imported Birds

Importations of birds from abroad is always an advantage. That the mixing of foreign blood with that of our own native races of domestic birds has proved of great advantage, no one who has bred poultry extensively will deny when we consider the item of increase in size and weight, at a given age, attainable with certainty through this crossing of foreign blood upon our native breeds. There is a decided advantage thus obtained in the enlargement and increase of weight and numbers of eggs obtained from the product of this crossing, the general gain by the process being most clearly in our favor. New blood is always quite beneficial to the flocks of the whole country.

Producing New Breeds

Any farmer may make a new breed if he has the patience to select carefully of the best, note their characteristics, discard all undesirable specimens and work on until his object is accomplished. It is, however, always in order for him to select his next year's stock from the best of those he has. The farmer of the present day has a great advantage in having the pure breeds ready established as a foundation upon which he can improve or build something better, hence his labors will be easy and light compared with the difficulties in the way of the pioneer breeders who produced the breeds we are familiar with at the present day.

Beginning With Poultry

The cost of pure-bred fowls to commence with will be but little, and they will prove more profitable than the common or cross-bred kinds. Among any of the pure breeds there will be some extra good ones, and these will bring twice or three times as much as common stock. Beginners should never buy their hens from any and all sources.

Correspondence

ROUP.—I noticed an article in the FARM AND FIRESIDE regarding roup in poultry; it attributes it to dampness and cold. I think differently. I have been raising chickens for more than forty years, and had roup among my poultry a good many times, and it nearly always occurs in warm, dry weather. This fall was unusually dry and warm, and the whole country, as far as I heard from, was scourged with roup; on nearly every farm the chickens had the roup. I have thought for a long time that roup was something similar to diphtheria in people, so I gave my chickens similar treatment. My chickens contracted roup this fall, and in two days nearly half of the flock—nearly two hundred—were sneezing and wheezing and some had their eyes swollen shut. I got some sulphur, which I nearly always keep, as I think it is useful in a good many ways among chickens, and put some dry sulphur in the mouth of each one that seemed affected. The worst ones I put in a good, roomy coop and gave them a second dose. Those that had swollen eyes I anointed with sulphur and lard, rubbing it on their eyes. Some of them could not see to eat or drink; I rubbed their eyes twice, and the next day they could see to eat. As a preventive I mixed ground corn and sulphur, wetting it with water, and fed the whole flock once each day for a week. They sometimes get it in another form; their mouths and tongues get thickly coated with a white, cheese-like substance; sulphur seems to kill that, and in a day or two that will come off, and they will soon get well. I also put a little saltpeter in their drinking-water, which is good for feverishness. C. W.
Oblong, Ill.

Inquiries Answered

Egg Foods.—B. L. S., Bedford City, Va., writes: "What are the best foods to make hens lay?"

REPLY:—Feed less grain and give meat, cut bone, cut clover, and do not feed too often.

Crossing Geese.—E. S. B., Atco, N. J., writes: "I have a flock of half-bred Toulouse geese, and wish to cross with some white variety. Please suggest the best breed for the purpose."

REPLY:—Try the Embden, which is not only white in plumage, but of very large size.

Wyandottes.—J. S., Elgin, Ill., writes: "Do the White Wyandottes have single combs? I purchased eggs and two of the chicks had single combs."

REPLY:—The White Wyandottes should have rose-combs, but it is admitted that sometimes one or more with single combs may appear, which should not happen, however.

Red Albumen.—M. S., Gap, Pa., writes: "Can you give any information regarding red albumen for which much has been claimed?"

REPLY:—There is no such thing as "red" albumen, unless that existing in blood is so claimed. The "red albumen," that has been so extensively advertised, is simply ground meat and blood. One party claims to have "discovered" red albumen in South America. As albumen is not a mineral, the claim cannot be verified. The so-called red albumen is simply an advertisement of meat and blood in the guise of a communication.

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Looks like Poison.—M. W. B., Stoughton, Mass. Your description indicates poisoning. May it be that somebody laid out poison for rats or mice and that your kittens ate the dead rats or mice?

Dangerous Typographical Error.—In the Veterinary Department of FARM AND FIRESIDE of January 15th the twenty-eighth line from above in the second column of page 10 erroneously reads: "or with a five-and-one-half-per-cent solution;" whereas the manuscript read correctly: "or with a five per mille, or a one-half-per-cent solution." As the solution is one of corrosive sublimate, a very strong poison, it is very dangerous to make, as the compositor has done, the dose eleven times as strong as it ought to be.

Mange.—A. A. P., Woodstock Valley, Conn. If your one-year-old dog has mange and has had it since last March the disease, inveterate as it now must be, may not be absolutely incurable, but to get it cured will cost you more money and trouble than the dog will be worth, and you will find it cheaper and more satisfactory to dispose of the dog and to procure a new one. But before you get another dog you must thoroughly clean and disinfect the sleeping and resting places of the present dog in order to prevent a communication of the disease to the new one.

Probably a Case of Cow-pox.—C. M. A., Sherman, Texas. What you describe appears to be a case of cow-pox—a very mild and not at all dangerous disease if not interfered with. It will run its course in a comparatively short time, and will cause no serious trouble except in so far as it will somewhat interfere with the milking and perhaps cause a contamination of the milk that will make the latter unfit for use. If you wish to do something you may apply to the sores after each milking a mixture composed of equal parts of olive-oil and lime-water.

Looks like So-called Blackleg.—J. E. D., Science Hill, Ky. Your description of the fatal disease of your cow indicates so-called blackleg, and I would have no doubt of it being blackleg if the animal attacked had been a young heifer or a yearling instead of a cow, because blackleg seldom attacks older cattle. There is no cure. The disease can be prevented by either keeping cattle, particularly young cattle, away from such places in which blackleg occurs, or by subjecting them while yet healthy to a protective inoculation. Your other question I cannot answer. Ask the chemist of your experiment station in Lexington.

Stepped a Rusty Nail into the Foot.—R. A. W., Big Red, Wyo. Since it is a whole year ago when your horse stepped the rusty nail into the foot, and since meanwhile the whole hoof has sloughed off and I have no means of knowing in what condition the foot may be at the present time I can only tell you that the foot will need protection (by means of proper dressing, bandages and a leather shoe made for that purpose), not only against injury, but also against filth and dirt. It may be sufficient to clean the foot once a day with a one-per-cent solution of creolin in water and to dress it with some absorbent cotton and a clean bandage. If not you will have to employ a veterinarian.

Slightly Disordered Digestion.—O. S. B., Chadville, Pa. That your five-months-old colt scours about once a week indicates that its digestion is in a slightly disordered condition. It may be that the young colt consumes more food than it needs. Make a change in its diet and feed less bran or withdraw the bran altogether. Bran fed in moderate quantities is under certain circumstances a very valuable food, but it is not needed by a young colt that probably gets plenty of milk. You also speak about worms in the rectum. If your horses have to drink stagnant water, or water from pools or ditches which contain the drainage of the barn-yard or of a horse-pasture, it will be advisable to discontinue the use of such water and, if possible, to use exclusively water from a deep well or from a good spring, free from any contamination with worm-brood and other injurious impurities. There is more death and disease in impure water than in anything else.

Hog-lice.—M. F., Woodburn, Iowa. A great many remedies are effective against lice, provided they are applied in a proper manner and the premises are thoroughly cleaned and freed from lice and nits at every application. If there are but a few animals (hogs) the gray mercurial ointment, which can be procured in almost any drug-store, is a first-class remedy. Concerning your old sow, a little of it should be rubbed in behind each ear and on a narrow strip from head to tail on each side of the animal. The next day a good wash with soap and warm water should be applied by means of a good stiff brush in such a way that the mercurial ointment, which was rubbed in behind the ears and on the narrow strips on both sides of the animal, will be distributed over the whole body and that the whole animal will receive a thorough wash. This treatment may have to be repeated in about six days; or the whole hog may be washed in a thorough manner by means of a stiff brush with a five-per-cent solution of creolin in water. This wash must be twice repeated—first on the sixth and then on the eleventh or twelfth day after the first wash—but at each wash the pen must be thoroughly cleaned. Unless your other hogs have never been near your lousy sow I am sure on close examination you will find that they, too, are lousy.

Cause of So-called Blind Staggers.—H. McC., West Hebron, N. Y. The immediate cause of so-called blind staggers consists in a morbid accumulation of water-like serum in some or in all of the ventricles of the brain, or, more correctly, in the abnormal pressure upon portions of the brain produced by such an accumulation of serum in the ventricles. Still, as chronic pressure upon the tissues of the various parts of the brain can also be produced by other causes, which, however, are comparatively rare—for instance, exudates and hydropic effusions on the surface of the brain within the membranes of that organ in cases of chronic meningitis; a morbid thickening and an adhesion of these membranes, formed by the products of the same disease, either between themselves or with the inner surface of the skull; exostoses proceeding from the skull; chronic encephalitis resulting in either softening or hardening of the brain; various morbid growths, particularly in the choroid plexusses, and finally the presence of one or more cyst-worms either in the brain tissue or within the membranes. As the pressure is not in all cases upon the same part of the brain, and as the different parts have different functions the symptoms are not in all cases alike. Further, as, with rare exceptions, the cause of the pressure cannot be removed, and as, at best, the effect of the pressure can only in some cases be temporarily lessened by a light diet, a low temperature and keeping the bowels open, so-called blind staggers must be considered as an incurable disease, notwithstanding that an animal suffering from blind staggers may live a long time. Therefore the disease must be defined as a chronic, feverless and incurable brain disease, manifesting itself by disorders in the functions of the brain. Although the chronic pressure, which constitutes the strictly immediate cause, can be produced by various morbid changes, an accumulation of serum is, at least in horses, by far the most frequent cause of the pressure.

Puerperal Paralysis.—C. B., Riceville, Tenn. Puerperal paralysis, or puerperal septicemia (so-called milk-fever) is a septic or infectious disease and, therefore, easier prevented than cured. The infectious principle, undoubtedly, invades the animal organism from without—most likely through the external genitals into the uterus, or, according to some modern investigators, through the teats into the udder, but possibly through both external genitals and teats. This known, the following measures of prevention suggest themselves: (1) A thorough cleaning and disinfection of all such premises in which the disease has become stationary, or has repeatedly made its appearance; (2) keeping the stalls, in which cows heavy with calf are kept, scrupulously clean; (3) if there is any doubt whether the premises, in which cows heavy with calf are kept, are infected or not to remove the cows a few days before calving to a place that is not only perfectly clean but also known to be non-infected; (4) an irrigation of the uterus, as soon as the calf has been born and again as soon as the cow has cleaned, either with a one-per-cent (1:100) solution of Pearson's creolin in blood-warm water, or with a one-per-mille (1:1000) solution of corrosive sublimate in blood-warm water; (5) letting the calf as soon as possible suck all four teats, or if that cannot be done to milk them out at once and to repeat this every few hours if the calf, for one reason or another, is not able to attend to that business. At every milking the cow should be milked clean, and if the calf does not regularly suck or cannot consume all the milk the frequent milking should be continued for at least four days. After about four or five days, or after all danger has passed, the cow may go back to her old stall; (6) the cow, especially if in a very good condition as to flesh, or if naturally a very good milker, should be kept on a rather light diet during the last five or six weeks before and the first two weeks after calving. If, in spite of these precautions the disease should make its appearance, which is not at all probable, an irrigation of the uterus with either a 1:100 creolin solution, or a 1:1000 corrosive sublimate solution should be made at once. Those that claim that the infection takes place through the teats recommend an irrigation of the udder with a solution of iodide of potash. This operation, however, must be left to a veterinarian. At the same time the frequent milking must be continued and the cow must be protected against draft and unnecessary irritation. If the bowels of the cow are costive a physic may be given, but if it is done it has seldom any effect until the cow has recovered and is, therefore, very likely useless.

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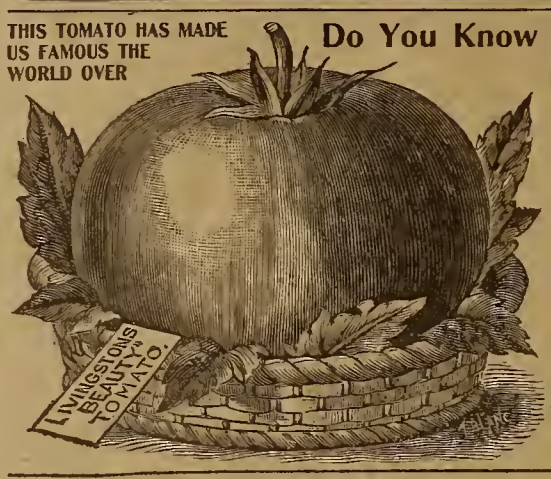

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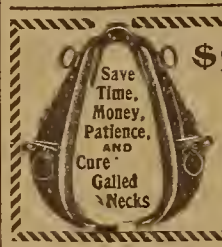

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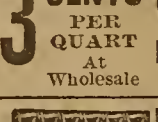

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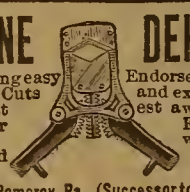

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Current Comment

Pictures Wanted We are desirous of obtaining photographs of interior and exterior views of beautiful and artistic grange halls. We will be glad to pay for such views a reasonable price. The views must be clear and well defined. If your hall possesses any marked feature of which you are proud, send photograph and description. A library, cozy corner, picture-hung walls, dainty arrangement of haugings, a neat, substantial and economical device for hiding the unsightliness of the ordinary stove and protecting the body from the direct radiation from an intensely heated stove, vine-clad walls, trees and shrubs that relieve the monotony and break the dreariness of the landscape, are all exceptionally good features.

Grange-made Men and Women "He is a grange-made man," said Dr. Ames, of Washington County, Ohio, in reply to a remark concerning a well-dressed businesslike farmer.

"Explain yourself," I answered.

"Well, he comes from very ordinary surroundings. He worked out for a number of years. He had certain qualities which induced us to invite him into our grange. He showed a disposition to improve in various ways. He now owns a small farm, has a creditable family and makes a good citizen. The grange has rounded off the rough corners and mannerisms, developed self-possession and business habits."

"What of Miss —?"

"She is a grange-made woman. She has a bright future before her. The grange is developing and encouraging her aspirations."

I mentally compared these two examples of the educative and refining influences of the grange with others naturally every whit as able and ambitious as were these two, but who lacked the ease and self-possession, and the command of circumstances that association with their fellow-men gives. Here was a man of ordinary ability who by the laws of heredity and environment would have been "only a farmer," coming up to town twice annually to pay his taxes, walking the street with stooped shoulders, protruding chin, slovenly clothes and gait, apologetically swinging to one side to avoid a well-dressed citizen or rudely jostling him. On the contrary by continual contact with his fellow-men he had learned how "to give and take." What might have been insolence or arrogance was transmuted into graciousness of behavior and dignity of carriage. Shrinking timidity and lack of self-appreciation, which tends to make one skulk and dodge, was transformed into modest behavior. He learned by his association with others that the true art of economy and accumulation consisted not so much in doing without things as in using business methods in buying and selling. In short, he was a man among men, doing his share of the world's work, respecting and respected. He became not "only a farmer," to be ignored as only an insignificant atom, but A Farmer—one whose opinion was to be respected and his influence much sought after.

And the young woman—full of energy, ambition, with finshed cheeks and bright eyes—was eagerly observant of all going on abont her. Here a nervous, aimless gesture was lopped off, there a self-conscious mannerism, offending the canons of good taste, was refined and changed into grace and ease.

I found myself desiring, with an exceeding great desire, that the thousands of ambitious, earnest, high-spirited, well-built boys and girls on our farms might find the same help and sympathy in a live, well-directed grange. Many are endowed with talents that would make them forcible factors in the world's progress who need only the brightening and strengthening influence of contact with their fellow-men.

"I never dreamed that my voice had any particular quality till I went into the grange," said a rising young concert singer. "I always loved to sing, but the notion of a 'career' never entered my stupid brain. When I went into the grange I found that my voice was in demand whenever there were to be special exercises. The members encouraged me, and I went to a teacher in vocal culture with great dreams of an operatic life. I soon found that I must content myself with concert singing. But see what an enlarged life it has brought me, and what advantages I can give my brothers and sisters. I verily believe if I had not gone into the grange I never would have achieved even this moderate success. I learned self-possession and self-command by my frequent duties there that have proved invaluable to me."

A college student reports this incident: "Will and I both entered college the same term. We roomed in the same house and dined at the same club. We soon became friends and decided to go into the same literary society. You know what an exalted opinion a new student is apt to have of himself when he is beseiged by members of the various societies to become one of them. You lose your conceit later, but that is another matter. Well, we both went into a society. Early in the term we were assigned work. The old students insisted that we, with the other new ones, must begin work at once, and thus make the task lighter. We were fined if we failed to make an attempt. We were both on for debate. How I did read up on that subject! I made notes of the points which I wished to make, and burned them. I wrote out my speech and consigned it to the flames. I again made out another set of notes. That disgusted me, but as the dreaded hour was near at hand I stuck them in my pocket. When my name was called I blindly groped to the rostrum. My knees shook and an awful desire for annihilation possessed me. My throat was dry, my lips were parched and my voice shook. I made my points briefly and shuffled to my seat. I was abjectly miserable. I would have welcomed a yawning chasm to swallow me in my misery. Soon my self-agony was transformed into sympathy, for my friend's name had just been called. I was astonished and delighted to hear him sail into that question with the best of them. He spoke easily, rapidly, forcibly and logically for ten minutes. He knew his subject and his audience, and was in sympathy with them at once. As soon as the meeting adjourned the students crowded around him and congratulated him.

"'Where did you learn to debate?' asked they.

"'In the grange at home,' replied Will. 'I always intended to go to college, so began practicing impromptu speechmaking to the horses, or wherever I might be at work. An uncle advised me to go into the grange. He argued that while I might gain fluency and self-possession among horses and stumps, that much of the lesson must be again learned when I addressed my fellow-men. I liked his logic and went into the grange. If I have any advantage over other country boys it is due to my training in the grange.'

"He was not brighter than the other boys, but his knowledge was available. He had acquired ease and proficiency in social matters as well as in study. The work he did counted for more than with most others, because it was habitual. His association with mature, slow-moving minds had served to temper his fiery disposition. In short, the lessons that consume the most time and energy and cause the most worry of the first two years of college life Will had learned in the grange at home. That advantage he preserved to the last, aud it is now serving him in his life-work. He graduated a year sooner than the rest of us."

My friend was silent for a few moments. "And what is the outcome of this experience?" I asked.

"You know that I have thought of the foreign-mission field for my life's work. Instead of that I am going back to the farm, organize a grange in my community and thus help the boys and girls to secure the things I have missed. Some will go to college later on, and the training will be invaluable to them. More will not, but a good grange training will fit them for performing the duties of life far better than many high-school graduates are fitted. I believe my work will be among my own people in my own country."

These are but typical examples, culled from the stories many have told me of the value of the grange in developing strong points in individuals. He who would argue against the value of meeting together in some club or society for serious work, as well as for social pleasure, will find facts and history against him. Only the millionth one can bear solitude. To his isolated life he must bring a pure heart and a ripe cultivation of the intellect. For the great majority of "God's cheerful, fallible men and women" there must be social intercourse and an exchange of friendly greetings. This need finds realization in the young people's literary societies, which at some period of its existence each neighborhood has organized and encouraged. After a few meetings they are soon dropped. The promoters lack the necessary experience to carry them on successfully and they fall by their own weight. There is wanting that solidarity, and unity of purpose that a well-organized society, backed by years of successful existence gives. But the need is felt by the brightest, most progressive young people. In the town and city the necessity is supplied by the club. Progressive women are not content with the local club. It must have the advantages offered by the Federated Clubs of America. So in the country the more progressive desire not only a local club-life, but the advantages of a federated club as well. This the grange supplies. The subordinate grange offers the widest field for local preferences and peculiarities while giving the advantages of a well-organized central authority. Were I asked what would contribute the greatest to the social, educational and financial needs of a neighborhood I would answer, "A live, energetic grange, officered by wide-awake, intelligent farmers of broad sympathies who are zealous for the best interests of their community." If a grange exists, then I would urge the ambitious young man and woman to go into it and work. No matter if some things do not please you. You will never find a perfect organization. The good in it, for you, is very likely to far outweight the ill. You will learn in it lessons of self-control, self-possession and the ways of winning that you would not by years of individual effort.

To Visit Ohio and Illinois A resolution was offered at the Michigan State Grange, asking that the grange appoint a committee of one to visit the centralized schools of Ohio and Illinois, in company with a like committee appointed by the Superintendent of Instruction. It was unanimously adopted. The committee is to inquire into the methods of these schools, and report upon the feasibility of organizing consolidated schools in Michigan.

This is another one of the farsighted public policies of Michigan State Grange that is making her a powerful factor in the state's progress, and entitles her to the position of leadership in the thought of the state. No state grange can rise to its fullest usefulness while neglecting educational matters or ignoring the work of practical educators. Michigan Grange co-operates with the schools all along the line. The result is, she is building up a system of education that is practical, and has the hearty support of the patrons.

Year-book H. F., Frankliu Centre, Quebec, Ont., writes: "Can you give me any information about the agricultural year-book, noticed in the Farm and Fireside of July 15th? Is it too late for me to receive a copy, and where will I write about the book?"

I do not know whether or no the supply of year-books is exhausted. You can ascertain by writing Superintendent of Documents, Union Building, Washington, D. C. The book is sold at cost of printing.

ROYALLY BRED CHICKENS

Why All Poultry Competing for Prizes at the Great Shows is Artificially Hatched

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Not for the sake of quantity, only.

It is because an incubator will hatch a more perfect chick and combined with the brooder keep it in more perfect health than a hen.

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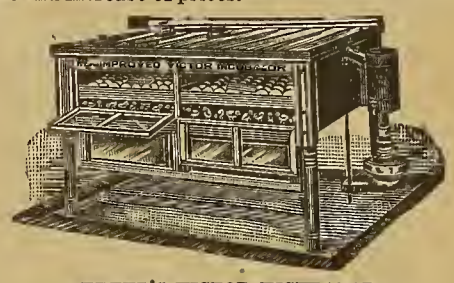
Many of the most successful breeders use the Ertel Victor Incubator. It is well to note the name. There are many incubators; but this is the best incubator. It is an incubator built on scientific principles; made of materials specially designed for the service it is to give, and so simple that it can be operated by any one.

The Ertel Victor Incubator not only gets the best result from the egg to begin with and hatches the greatest possible number, but it induces a greater growth of the chick—a sturdier growth that means more weight, an eager market and increase of prices.



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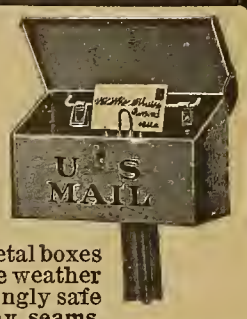
Any one interested in chicken raising, or breeding of any kind of poultry, is invited to send for the free booklet and catalogue of Ertel Incubators. It is more than a mere book of advertising; it is a poultry manual, worthy of a place among the standard poultry works of the times. For a copy, address George Ertel Company, Quincy, Ill.

"Things are not what they seem"



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Seams are the "weak links" in metal boxes when exposed to the weather—therefore, a seemingly safe Mail-Box with many seams, is not what it seems. The safe way is to use the practically seamless, Heavy Steel Plate Box made only by the

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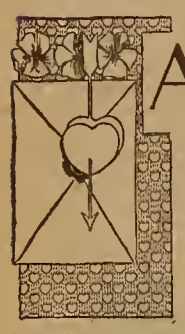
"Sweet Letters Of The Angel Tongue

Home-made Valentines

BY E. A. MATTHEWS



Among the saints of Christendom there are two most dear to the heart of young people, St. Nicholas, the patron of children, and St. Valentine, friend of lovers. In December all the world celebrated the birth of "good St. Nick," and now comes another holiday, the fourteenth of February, festival of Bishop Valentine. This holy man was born in the third century, in the lovely land of Italy. There are few legends concerning his life, but we know that he suffered martyrdom at the command of the Roman emperor, Claudius. It is said of him that he loved the young more than the old, and went about the land curing sick children and finding homes for young orphans. He once restored eyesight to a "fair young maid" by merely passing his hands over her eyes.

It was the custom of the early fathers of our church to change the pagan festivals to saint days and sacred times, so that the new religion easily took the place of the old.

History traces St. Valentine's Day back to the Roman Lupercalia in the month of February. This month was dedicated to the goddess Juno, who was called the "mighty mother of men and women." Among other customs, they had a "choosing," where the young folks put their hands into a closed box filled with slips on which were written the names of all present. After some mystic words were uttered, the hand was withdrawn, holding a slip, and the name upon it was that of the future lover or sweetheart. This custom followed the Romans into other lands, and finally took deep root in England, and many other charming fancies linger there to the present hour about the festival of St. Valentine.

Poets have rimed about them, and grave historians have recorded the frolics of court and common people.

From Chaucer down to the village paper of to-day we find the praises of the good saint sung most cheerily.

Every year we hear the cry that light-hearted merrymaking has become a thing of the past and no more enjoyed by the prosaic young folks of to-day, but all the same the boys and girls plan for parties, and exchange valentines with the ever-living, ever-glowing fun of their forefathers and foremothers, for "long as the flowers bloom in May there will be love and lovers and maidens alway."

When "February's saint" takes possession of the hearts of youths and maids there is great demand for pocket-money, and anxious planning for gifts that will please the faithful chosen one.

The old lace-paper, fragile valentines are now out of date, and the new ones are far more dainty and sensible. Flowers are love's natural gifts, and with the giver's name attached, make an ideal offering, but some may find them too difficult to obtain in mid-winter. For these there are many pretty substitutes easily made and with small expense at home.

Cut from cardboard of delicate gray tint the covers of a book, which shall be nine inches long by four inches wide. Fold in center, thus making leaves four and one half by four inches. The cover may be lettered in blue and gold, and the leaves may be tied together with pale blue ribbon. Panel cards decorated with hand-painted forget-me-nots, or roses, and made appropriate by dainty verses, would be very artistic.

The following may serve as suggestions:

"Good morrow to my Valentine."

"The sky hath its star,
The sea hath its pearl,
But all I have
Is my darling girl."

"If thou will be my Valentine
The honeymoon will always shine."

Another valentine is made of two hearts cut from cardboard gilded around the edges and fitted with leaves tied in with gay ribbons, so that the whole may be suspended. Upon the outside heart paint a silhouette of two kneeling cupids, holding aloft a heart, applying to it a torch, and these words printed in gilt letters:

"Love's torch burns forever;
Let its warmth vanish never."

Candies in pretty boxes or in satin and lace bags make charming valentines, also crystallized fruits, cherries, plums, pineapples and oranges. With these send some sweet thought—some words that will linger in memory long after the bonbon vanishes. Such as, "Sweets to the Sweet," "A wilderness of sweet thoughts," "Sweetheart, be my Valentine."

Square or panel-shaped cards may be decorated with water-colors; little books may be made, and will prove most acceptable gifts.

Fans are dainty gifts for the lovers' festival. Writing tablets, portfolios, glove-boxes, stationery, photographs, pictures, quaint frames and cushions, pincushions in the shape of hearts, sachets also heart-shaped or with hearts painted on the material, whether of silk, linen or bolting cloth.

The following mottoes printed with water-colors on cardboard, or illuminated after the fashion of wall-texts are most beautiful tokens:

"Gather ye rosebuds while ye may."

"To the daintiest and dearest."

"Go, lovely rose, tell her I love her."

"None know thee but to love thee."

"My mother is the one I love,
And she's my Valentine."

Many other appropriate thoughts or quotations will suggest themselves to your mind, and you will derive much pleasure from the artistic work, as will your friend from receiving the tokens of love.

Of course, a book is the most acceptable of all gifts, and never were they so cheap and plentiful. Beginning with the paper-covered booklet worth but a few pennies, up to the edition-de-luxe volume costing many dollars, they may be found to suit every purse or fancy. The field of choice is almost without limit, and all of us would welcome such valentines.

Original Design for Tatted Fringe

Start this design with a ring of 8 p (picots), each separated by 3 d (doubles), close ring. Tie on a second thread, and make 3 d, 1 p, join to the ring; continue until you have made 8 p. Now make a chain of 10 d, 1 p, 10 d, and join to preceding chain; repeat around. Bring both threads up to the p of first chain of this row, and make a chain of * 2 d, 5 p, each separated by 2 d, 2 d, join to p of next chain; repeat from * around. Now make a chain of 2 d, 1 p, and join to the first p of preceding chain * * 2 d, 1 p, join to next p; repeat from * * three times. 2 d, 1 p, 2 d; join to first p of next chain; repeat from first * *. Join the wheels by center p of two chains. Tie both threads in the fourth p of one of the side chains, and make 2 d, 1 p join to p of preceding chain; repeat until you come to the joining-place of the wheels, where chain which you are now working must be joined to 2 p taken together, one from each wheel, as the fringe is to be tied into this row; it is best to make the p just a little larger than the usual size.

In making the heading commence with a ring of 5 d, 3 p, each separated by 5 d, 5 d, close. Now make a chain with two threads of 8 d, 1 p, 8 d; another ring like first one; join both at the side; then a chain, join third ring to the wheel; leave fourth ring unjoined, and join fifth to the wheel, leave three rings unjoined between the wheels, and so continue to end of lace. Make another row like the one just made, joining it to the chains of first row. The three rings between wheels and heading are made this way: First tie one thread in the p of center ring, between the wheels make 8 d, join to next ring, 2 d; join to wheel; make three more joinings to the wheel with 2 d between each joining; then 4 d, 1 small p, 4 d, close. Make second ring of 4 d, join to first ring 7 d, join to wheel, 2 d; join to next wheel 7 d, 1 small p, 4 d, close. Third ring is made with 4 d, join to second ring, 4 d, join to wheel; make 3 more joinings to the wheel with 2 d between each joining; 2 d, join to ring in heading; 8 d, close, and tie securely.

This fringe wrought in linen thread or coarse spool-cotton will make a pretty trimming for lambrequins or piano-stool or stand-covers, or for the ends of dresser, bureau or side-board searfs. Worked in fine thread, and omitting the fringe and last row of chain at the lower edge of wheels, it forms a lovely lace for trimming different articles. In a finer thread it could be used upon articles of underwear or upon pillow-cases.

Mrs. J. R. Mackintosh.

Child's Cap

This is made of quilted satin. The shape is a long double parallelogram. Measure just the distance around the face, and allow two more inches for comfortable length. The seam is up the back. Trim with fur. It can be made of velvet if desired.

A Valentine Heart Market

From first to last it was a pretty, enjoyable entertainment, and originated with a matron who wished to honor a young girl who was visiting her.

The decorations were in red and pink. On the walls were large cardboard hearts, in the prevailing tints, edged with gold, and bearing quotations daintily lettered and skilfully painted in water-colors, with cupids equipped with bow, arrows and quiver, or other designs equally suited to the day, while everywhere about the room were bowls holding clusters of red and pink roses.

In a corner of the room a charming floral bower made of vines and realistic paper roses had suspended from the top a pink cardboard, on which was printed in red, "Heart Market," and below the following verse:

Come here, if a partner
You wish to find.
For we have valentines
Of every sort and kind.

On a table stood six baskets, numbered and trimmed with ribbon bows and flowers, and filled with valentines made by the clever hostess.

On being received by the hostess and her young friend, each guest was directed to the "heart market," which was in charge of a dear little "god of love" attired in gauze, spangles and wings.

The men drew from basket number one, the women from number two. The first were floral affairs so made that the central blossom opened so as to disclose the face of one of the girls present. An amateur photographer having previously secured a likeness of each one. Of course, the young men readily understood that the owner of the face on his valentine was his partner for the evening.

For the young women were square envelops bordered with gold, painted with forget-me-nots, cupids and lovers' knots, and in the center a sentimental quotation. Inside was a cardboard in the shape of a dart, wound with white thread, and a beautiful needle-book holding twenty needles.

The company were informed that the young men with their partners must thread the needles, knot the threads, and place each needle again in its place, and that two prizes would be awarded, one to the couple accomplishing their task first, another to the two who did their work neatest. All went merrily to work; they found the threads had been previously made of equal lengths, and that the needles were all of the same size. The lucky four went to the "heart market," securing from the third basket pretty bonbons in neat, heart-shaped boxes, suitably embellished on the outside, and on the inside of the cover a humorous rime.

After this came the progressive angling game, which was the chief feature of the evening, and as it consisted of fishing for hearts, was entirely in keeping with the occasion.

The tables were numbered as in euchre, the winning couples going to the next table, but not changing partners, those who were at the head table remained there, while the other two went to the foot.

On every table were twenty little cardboard hearts, with diminutive, upright, gilded rings fastened to the center of them. The players were given miniature fishing poles and lines, with wee hooks on the end, and requested to fish up as many cards as they could in five minutes. This was not at all easy to do, as it takes an extra-steady hand to be successful. At the end of the allotted time the "mistress of ceremonies" called a halt, and the partners at each table counted together the number of hearts they had captured, and the two having the greatest number progressed.

The tally cards added much to the jollity of the evening; they were made to look as much as possible like the lace-trimmed valentines of long ago. Inside was a place to paste the tiny, red hearts which were used to keep score;

the outside was gorgeously painted with gay flowers and such old-time verses as the following:

"The rose is red, the violet blue,
But neither is so sweet as you.
My love and I should always go together.
Though it be drear or stormy weather."

At the end of the game hearts were counted; the couple having the most went to the market, and received from the fourth basket, which was heaped with heart-shaped pin-balls for the men and satin sachet-bags all lace and ribbons for the women, one of each kind, which were, of course, much prettier than any the basket contained; later the rest of the guests made selections in turn according to the number of games won.

The fifth and sixth baskets were found to contain long-stemmed half-blown roses, red in one, pink in the other. On close inspection was found in the heart of each a jingle in the form of a fortune.

A supper where the name-cards were pink, heart-shaped bonbons, on which was placed in raised red frosting the name of the guest, and ices in the shape of doves, rounded out this most delightful evening.

Ruth Virginia Sackett.

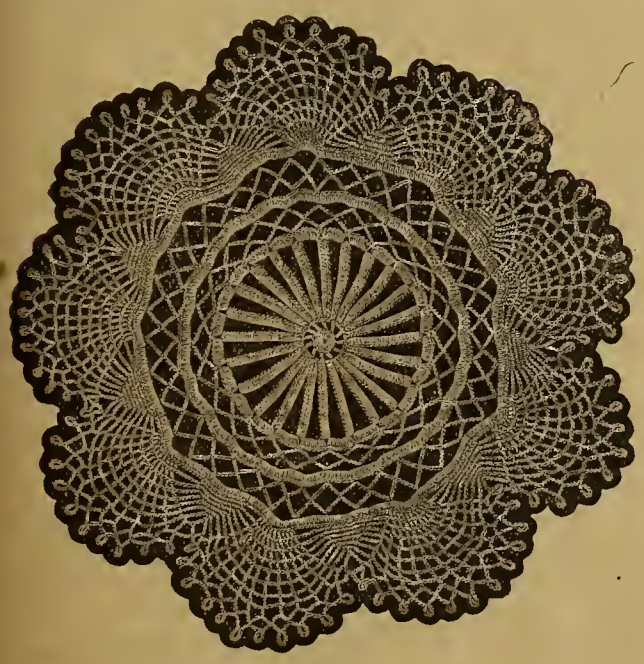
St. Valentine's Festival

When or why St. Valentine was chosen the patron saint of lovers, history leaves us to conjecture. Nor can we discover in the legends of the different saints the name Valentine, or any trace of the practice peculiar to February fourteenth. It is highly probable that the connection is purely accidental.

It is frequently suggested, and is not an impossibility, that the custom may have descended to us from the ancient Romans, who, during the festival of Lupercus, the god of fertility, celebrated on the date corresponding to February fifteenth, and who were wont, among other things, to put into a box the names of young women for the young men to draw out as chance directed. It is further suggested the church did with this what she did with so many of the pagan practices that could not be extirpated—that is, gave it a religious aspect by substituting the names of particular saints for those of the young women. In proof of this theory it is pointed out that in the Roman Catholic church to-day the usage is by no means uncommon of choosing, either on St. Valentine's or some other day, a patron saint who is called a valentine.

However, it is more likely that the custom of choosing valentines, or special "loving friends," is a relic of that nature religion which was the primitive form of religion in Northwestern Europe as elsewhere.

Though history fails to enlighten us in regard to its origin and connection with the saint whose name it bears, it records the fact that the day has been celebrated by various nations, particularly England and Scotland, from a very early period, by a very amusing and peculiar custom. We read that "on the eve of St. Valentine a number of young folk, maids and bachelors, would assemble together, and inscribe upon little billets the names of an equal number of maids and bachelors of their acquaintance, throw the whole into a receptacle of some sort, and then draw them lotterywise; care, of course, being taken that each should draw one of the opposite sex." As we may readily believe, "the man stuck faster to the valentine that had fallen to him than to her to whom he had fallen." The obligation to the neglected party was canceled by a gift of some sort. These imaginary engagements often led to real ones, because one consequence of the choosing of a valentine was that for a whole year the bachelor remained bound to the service of his valentine.

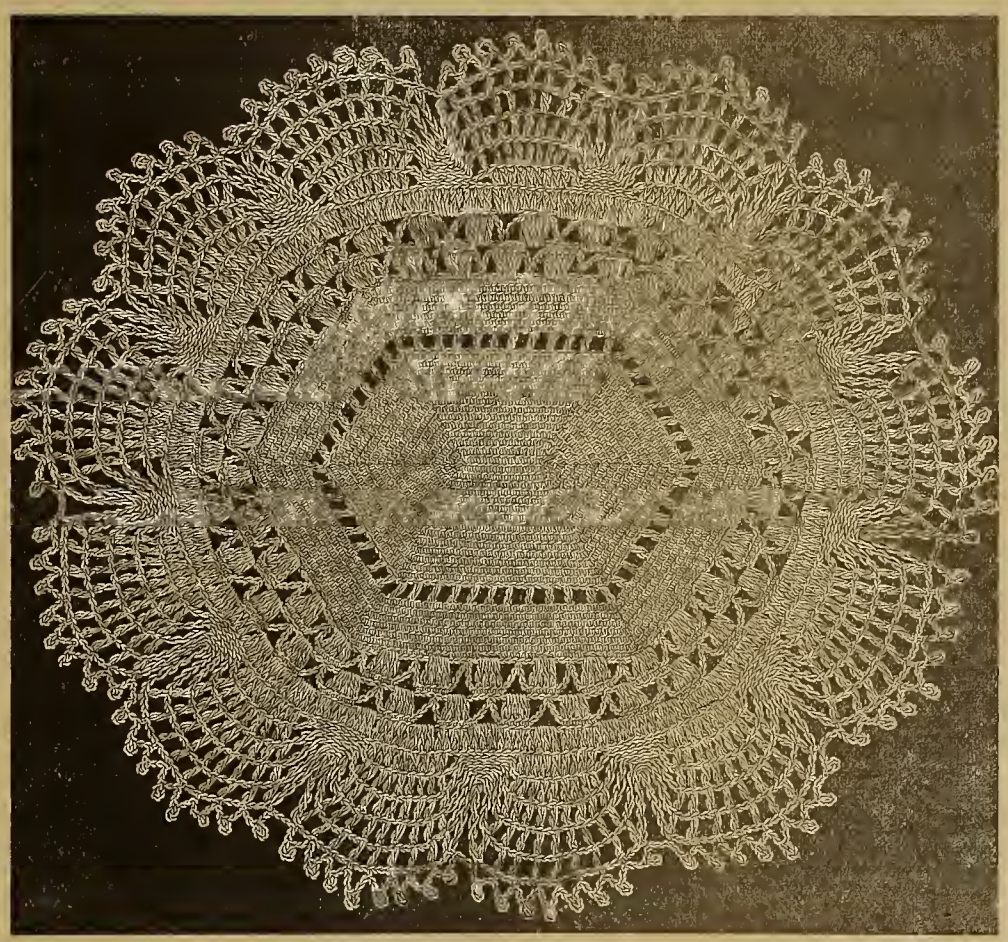


Later the practice of sending dainty missives containing sentimental verses, which were known as valentines, became the popular method of celebrating the occasion. Much of the graceful symbolic meaning of the festival was to an extent destroyed when what is known as the comic valentine came into evidence.

Although the old-time festivities have been done away with, the day has never ceased to be popular with young people, and never will be so long as love remains in fashion. The customary way of recognizing it now is to exchange valentine gifts or "love-tokens." These may take the form of flowers, cards, books, pictures, novelties in jewelry and fans. Indeed, there is little or no restriction, save, perhaps, that of the purse, set upon one's choice of a valentine gift; and at the proper season, the shops present an almost bewildering array of all sorts of wares, specially designed for the occasion.

When sending a valentine gift, it is proper to inclose not only one's card, but also a brief love-message written thereon.

Katherine E. Megee.



The Dull Season

Right after the holidays comes what merchants call the dull season. Extra clerks are dismissed, and others given vacations till spring trade begins. To the mother of small children this may be a profitable harvest-time, for there is plenty of time and room in the stores to look for bargains.

In spite of all the jokes in the papers about women who buy anything and everything because it is on a bargain counter, there are women who systematically reduce household expenses by hunting bargains; but they are bargains of the right sort. Now is the time to pick up dirty pieces of lace and embroidery, wrinkled ends of dress-goods, remnants of stuff from the white sales, and dozens of other odds and ends that work up so nicely in children's clothes. The white goods, laces and trimmings need only to be washed and dried in the frosty air—for nothing bleaches like freezing—then ironed smoothly, and they are ready for work, with the advantage of being shrunk. Most mothers dislike to shrink a clean, new piece of goods or sheer embroidery, but find often to their sorrow that the first crisp daintiness was hardly worth all the trouble that came afterward when exasperating puckers appeared in the garment. The soiled and slightly damaged goods can be purchased for a mere trifle, and are well worth the extra work and planning necessary to make them do.

If you are not skilful in making little dresses, send to one of the city stores for one or two guimpes, and your way is easy. These little waists can be had as low as twenty-five cents, and are a great saving to the busy mother. They fit, wash and iron better than a dress in one piece, and can be used for any number of slips or dresses, and are very easily made. A pretty way is to use white guimpes exclusively, and have both white and colored frocks to wear with them. The guimpes may also be used for woolen slips and look extremely pretty with pale blue, pink or dark red French flannel overdresses. By using an underwaist pattern, the guimpes are easily made at home.

Then there are little aprons, shirts, and undergarments to be made for the coming summer. The same patterns that are used for the overdresses can be taken for aprons, only making the arm-holes a little larger. Hemstitched ruffling makes a pretty finish for both skirts and aprons, but is apt to take too much time where there are several children to provide for. It is always well to have a good pattern for each child, and more economical in the end.

Among the dainty novelties for warm weather for the coming summer will be the loose kimono jackets and white sunbonnets. The former are useful in case of sickness, and are cooler than dresses on hot afternoons, while the bonnets may be worn by the smaller children even to church in the country. Their charm lies in their perfect cleanliness and simplicity for while a trimmed hat gets dusty the white bonnet improves with each washing.

These are only a few of the many pretty and useful things to be made for the little people. There is really no end to the possibilities of a good supply of remnants. Never throw away a new piece of goods, and never crumple it. The bits that are not used for patches on the garments will make doll clothes, fancy articles, and patchwork. I never pass the basket with the lace and embroidery remnants in it without running through them, no matter how much of a hurry I am in. A few weeks ago I bought a damaged piece of Swiss edging for fifteen cents that had enough perfect goods to trim two skirts.

Of course, no one would advise reckless bargain buying. There is but one safe rule, "Be sure you are right and then go ahead."

Hilda Richmond.

Simple Table or Toilet Mats

The three pretty mats illustrated herein are made of No. 10 or 12 white spool-cotton, and will answer either for table or toilet mats. They are so simply made that to one deft in crocheting no directions will be necessary.

A Glint of Sunshine

There are letters so doleful and so full of complaints that the whole day is darkened by the gloomy and unhappy thoughts which fly out of them when they are unsealed. Other letters, on the contrary, carry with them such loving friendship and bright thoughts that even if the weather be dark and dismal they bring sunshine.

The following letter, written by a girl who lives on a ranch in California, is filled with cheerful scenes and thoughts of so "many nice things to do out-of-doors," and comes like a glint of sunshine to a dear old friend:

Bostonia, California.

My Dear Anna:—

If it is growing cold and cloudy with you, I wish I could give you some of our warm, sunny days. It is perfect out to-day, and there will be such beautiful moonlight to-night.

We are picking our first oranges to sell to-day. They usually are not ripe till after Christmas, but they blossomed out of season last time, so some are sweet and yellow now. We can get much more for them at this time of year than later. Father is in a hurry to get these off, so my mother, sister, and I helped him and the man. We brushed the oranges to get off all the dust and dirt, and I put the name of our ranch on the papers which are wrapped around them. I did it with a stamp, and it was great fun.

The raisins are dry now, and I send you a little box of them, which I hope you will like. They grow almost next door to us. We like them when they are so soft and fresh.

I am quite a dairymaid, for I make butter three times a week now. I don't put the cream in a churn, but stir it with a spoon in a jar, and it comes in five minutes. I wonder if you did not use to make it too.

My mother and brother have chickens in partnership. They are all White Leghorns, and look so pretty in their yards. We don't let them run loose, so the eggs are all in the nest-boxes in the chicken-houses. I gathered them the other day when mother was away, and found twelve in one nest. It is fun to find forty at one time, as I did then. Father and mother are out picking our English walnuts and almonds now. We only have a few for fun. We have some olive trees, too. They are very, very pretty, so neat and Quaker-like in their smooth little gray leaves. You see we have a great many nice things to do out-of-doors. I should be very sorry to have to live in a city instead of this beautiful valley.

I have a comforter to tuft to-day, for the nights are cold, though the days are warm, and I shall need it soon.

I often think of you, and of the visits I had last winter in your pleasant room.

Sincerely your friend,
Helen J.

This is certainly cheering. F. B. C.

What does a chimney do to a lamp?

MACBETH'S is the making of it.

My name on every one.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.
MACBETH, Pittsburgh.

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WHITE BRONZE

is strictly everlasting. It cannot crumble with the action of frost. Moss-growth is an impossibility. It is more artistic than any stone. Then why not investigate it? It has been adopted for nearly one hundred public monuments. Write at once for free designs and information. It puts you under no obligations. We deal direct and deliver everywhere.

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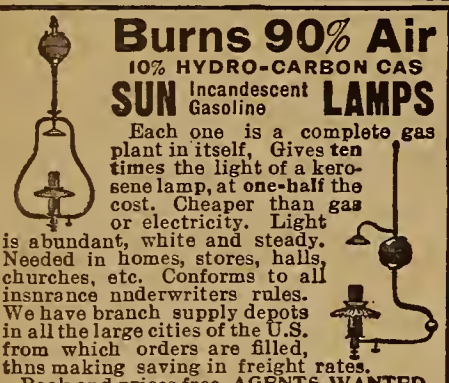

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WILL NOT BOIL, FREEZE OR WASH OUT.
They are the daintiest, most economical and durable package dye in the world, and positively
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Feathers, skirts, waists, odds and ends of ribbon or silk can be made to look like new for a few cents in your own home and being twice the strength of other dyes, carpets and rugs retain their brilliancy for years when colored with TONK'S FRENCH DYES.
Each pkg. colors from 1 to 4 lbs., according to shades. Price 10 cts. per pkg., 6 pkgs. for 40 cts. Say whether for wool or cotton and give dealers name.
Agents make $2 to $6 a day easily—write at once.
FRENCH DYE COMPANY, Box 409, Vassar, Mich.

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and Rugs—when the rags are colored with "PERFECTION" Dyes—possess rich and beautiful shades that retain their brilliancy for years. Their use is EASY, and results are SURE. To enable you to try "PERFECTION" DYES we will send you a large package each of Turkey Red, Green, Orange, Cardinal, Yellow and Pink (or six packages any colors wanted) for 40 cents; three packages for 25 cents, or single package for 10 cents. New catalogue and shade cards free. Address:
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Merry Cupids

"OH, THIS is my valentine," said Helen, as she took the morning mail on good St. Valentine's day.

"Your valentine! What do you mean? You with your grown-up boy?" asked Marion, a friend and guest in the house.

"Why not? My husband sent me valentines, his own riming, before we were married, and has never failed a year since."

"That's the funniest thing I ever heard of," said the guest. "I suppose then you would maintain that your husband is still your lover, would you not?"

"Certainly. I think it is a very false idea that love walks out about as soon as the marriage ceremony is said. A few lives go wrong, and I suppose that encourages croakers, but it ought not to involve the sweetness and comfort of thousands of happy homes."

"But, Helen, if your valentines are not very secret, show me some of them. I like to read original rimes, then it is so strange to me."

So Marion really spent the whole morning, as she said afterward, in the spirit, if not the presence, of St. Valentine, who suffered martyrdom in Rome in the time of Claudius, A. D. 270, and whose sweetness of life has been celebrated with love-messages these many hundred years.

"I am going to steal away with copies of a few of these. You must not say me nay, for it may do a lot of good. It has done me good already."

"How has it done you good?"

"The lives of most, if not all, of my married friends seem so strenuous. There never seems any time for the amenities of life. The husband and wife seem each to have their own separate interests, friends and occupations. I have often wondered if they even recall their lover days."

"I really do not know which of all to choose, only the first one, or the one I will put first," Marion continued.

"You'll have to choose, for I cannot say which is best," answered Helen.

Once in the years gone by I sent
Unto the girl I fancied best
A valentine, a wondrous card,
In lace and gaudy colors dressed.

Again the day of leap-year month,
The fourteenth day, is here, and now
I send to her I dearly love
A valentine—this truest vow.

While life itself shall last I'll be
Tender and true, my love, to thee.

"Why, Helen, if I should study these valentines very long I should really believe that chivalry had not passed with the other centuries, but that men and women lived for each other, as of old."

Marion chose another of a later date:

As over a garden old,
With its nooks and shady bowers,
There hovers the scent of the rose,
The sweet perfume of the flowers—

So into all my life,
It matters not what I do,
Into every thought and act
Steal there sweet memories of you.

Helen explained to Marion that a great sorrow had came into their lives before she received the next valentine that her friend selected as specially choice.

Mid winter's ice and storms we dream
Of summer's warmth and beauty.
In days of trial the roses seem
All stripped from paths of duty.

But summer's sun and pleasure's way
Would soon our fancy weary
Unless we knew the sad, the gray,
The long days and the dreary.

To us have come the sad days, dear,
The winter's snow is blowing—
'Tis hard to smile and keep good cheer
With hearts almost o'erflowing.

But dear this valentine I write
To pledge my love forever.
In winter gray or summer bright
Its strength shall lessen never.

As Marion reluctantly folded the other valentines, many in number, Helen said, "Hereafter I hope you will be more of an optimist, and believe there are songs in the hearts of most married people, even though they may not find expression always in words."

MARY JOSLYN SMITH.

Kidney Disease

ITS INSIDIOUS PROGRESS AND SUDDEN TERMINATION

Not long ago a man who had made a success in business bought a country place and retired from active commercial life. By all outward appearances he was a healthy man. He entered upon the life of his country home with great zest, engaging himself in the culture and care of flowers and enjoying the pleasures of outdoor life to the full. One day they found him unconscious on the lawn. The family believed he must have been the victim of tramps. The doctor came but could not rouse him from his stupor. When the autopsy was made it showed that death was the result of kidney disease long neglected.

This is a true story. The facts are given as the newspapers told them. Only the names are suppressed. It is a story that in one way or another is being repeated every day, the victims being men and women who suffer from "kidney trouble" and neglect it.

SLOW POISONING

It is the office of kidneys to filter the blood and remove from it those foreign matters which if retained in the blood corrupt and poison it. The principles so eliminated by the kidneys are constantly being produced in the tissues of the body. The kidneys are therefore ceaselessly active and care for an enormous quantity of blood. When by reason of disease the activity of the kidneys is impaired, or when they are overtaxed by being required to eliminate from the blood an undue quantity of corrupting substances, thrown into the blood as a result of disease of the stomach and other organs of digestion and nutrition; then it is that the poisonous deposits first begin to collect in the blood, and breed deadly consequences. The accumulation of the poison is slow, and the physical changes which accompany the poisoning of the system are slow also, and this makes the great danger of the disease. Many times the victim of kidney disease does not awaken to danger before the entire system is poisoned, and the struggle for life is desperate and doubtful.

ACT AT ONCE

Prompt action cannot be too strongly urged upon those who have even the slightest symptoms of "kidney trouble." The timely use of Dr. Pierce's Golden Medical Discovery will save both suffering and expense.

"For a long time I was suffering and was hardly able to get about," writes Mr. Andrew J. Jennings, of Thomas, Tucker County, W. Va., Box 194. "Was bothered with kidney trouble and my whole system was out of order; had no appetite. A friend of mine told me to try Dr. Pierce's Golden Medical Discovery. I did so and the first bottle restored my appetite. I took six bottles of 'Golden Medical Discovery' and some of the 'Pleasant Pellets' and feel like a new person. Think there is no better medicine and I heartily recommend these medicines to every one whose suffering is of the nature that mine was."

The symptoms of kidney disease are many, and so variable that it is almost impossible to describe them all. In general the indications of kidney disease are pain in the back and loins, change in the urinary excretion, a depressed feeling with lassitude or weakness; irregular heart-beat; hot and dry skin, deranged digestion, variable appetite, urinary incontinence, puffiness about the eyes, swelling of the ankles or in different parts of the body. These symptoms will not be present in any one case, probably, but any one of them is a reason for a prompt attempt to cure its cause.

DON'T TAKE CHANCES

The symptoms of kidney disease are so variable and so liable to be mistaken that it is no uncommon thing for the inexperienced practitioner to treat the sufferer for the wrong disease. Such was the case probably with Mrs. Hayter, whose letter is given below. "Several different doctors treated her but none did her any good," until she consulted Dr. Pierce.

"I had been sick for more than a year with kidney trouble," writes Mrs. Lucy Hayter, of Jacksboro, Jack County, Texas. "Several different doctors treated me, but none did me any good. One doctor said I never could be cured, that I had Bright's disease. I suffered nearly death at times; had spells the doctor called spasms. Was bedfast most of the time for six months. My mother begged me to try Dr. Pierce's Golden Medical Discovery. With but little hope I wrote to Dr. Pierce and he said he could cure me. I began to take his Golden Medical Discovery, and although I had given up to die, I began to improve from the start, and by the time I had taken twenty-two bottles I was entirely cured. I thank God for the 'Golden Medical Discovery.' I weigh more than ever before in my life and I am entirely well."

Dr. Pierce invites any person who suffers from disease in chronic form to consult him by letter, *free*. All correspondence is held as strictly private and sacredly confidential. Address Dr. R. V. Pierce, Buffalo, N. Y. A great many people, who, like Mrs. Hayter, have written to Dr. Pierce "with but little hope," have like her been perfectly and permanently cured by his treatment.

FREE ANALYSIS

An analysis of the urine will be made free of charge. This often determines the nature of the disease when accompanied with a full statement of symptoms. Do not neglect this opportunity to obtain a specialist's opinion on your condition absolutely without fee or charge, together with a *free* urinary analysis. If you are sick consult Dr. Pierce, by letter, without delay.

It is to be remembered that Dr. Pierce's Golden Medical Discovery cures diseases of the stomach and other organs of digestion and nutrition, cleanses the blood of waste substances and so removes one of the causes which conduce to the over-burdening and disease of the kidneys.

Don't be fooled into trading a substance for a shadow. Any substitute offered as "just as good" as "Golden Medical Discovery" is a shadow of that medicine. There are cures behind every claim made for the "Discovery" which no "just as good" medicine can show.

ENTIRELY FREE

The best Medical Book *free*. Dr. Pierce's Common Sense Medical Adviser, containing more than a thousand large pages and over 700 illustrations, is sent *free* on receipt of stamps to pay expense of mailing *only*. Send 31 one-cent stamps for the cloth-bound volume, or only 21 stamps for the book in paper covers. Address Dr. R. V. Pierce, Buffalo, N. Y.

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We have just issued the **Twentieth Century Peerless Atlas and Pictorial Gazetteer of All Lands.** Two invaluable reference works in one, and sold at one fourth customary Atlas prices. Gives Official Census of 1900 and Crop Statistics. New copyrighted Maps. New and brilliantly illustrated Gazetteer. Thoroughly up to date.

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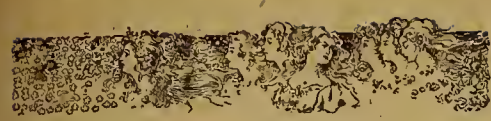

SUNDAY AFTERNOON

Sunbeams Glisten Brightly

Day by day the sunlight
Sinketh in the west,
Daylight fadeth from our sight,
Nature seeketh rest;
But we know the darkness
Soon will disappear,
God, with love and kindness,
Ever stayeth near.
First, the moonbeams calmly
Cover with weird light
Streams that flow so silently,
Silvery, cool, and white.
Then the morning dawneth,
And the light of day
Decks the earth and draweth
Life from sun's bright ray;
Sunbeams glisten brightly
In the drops of dew,
And God, loving, kindly,
Doth our faith renew.

Thus when shade and shadow
Darken heart with fear,
Faith doth say, "To-morrow
God will dry your tear."
First comes peace as moonlight,
Mellow, mild, and still,
Then strength, as the sunlight,
Heart doth warm and fill.
Matters not if sorrow,
Anguish, grief draw near,
From God's fount just borrow
Strength, hope, pure, and clear,
For to heart that trusteth
Comes a bright, pure ray;
Faith and hope it giveth,
Alloweth peace to stay.

—John G. Quinius, in Religious Telescope.

The Strong Boy

DO YOU know him? Perhaps he doesn't weight one hundred and forty pounds. Perhaps he doesn't play center-rush on the team, or stop the ball behind the bat, or lead the tug of war, or put the shot farthest, or row stroke oar.

Perhaps he doesn't swagger and bluster and bluff and boast and bully and browbeat little chaps if they fall in his way, or "guy" modest girls as they meet him, or jostle elderly people if he pass them; or defy the teacher, or ridicule the preacher.

Perhaps he is slender, modest, studious, reticent, respectful, quiet. Not girlish or prudish, not pale-faced or puny, but just a rational, diligent, earnest, sober boy.

Look out for him! That quiet exterior covers big possibilities. You would better not fool with his patience. Those slender muscles are not beefsteaks, sure enough, but they may be strong, and spry as steel. That calm eye and firm face do not flicker or flinch before noise and bluster. He doesn't fight till he has to, then he fights to a finish.

The strong boy may make mistakes, but it is at these times when he may best prove his strength. He may fall in with bad fellows, bad manners, bad habits, bad amusements, bad intentions. He feels their grip and influence tightening. He knows their danger, but other boys risk it, and he rather likes to be one of the boys.

There comes a day, however, (more likely a night alone with his soul), when a word of warning comes back to him from early days; a word of mother dear or father faithful. Conscience sounds alarm. He feels those chains of influence, appetite, or habit which were supposed to be fanciful, merely, and easily broken, contracting with slow but irresistible power. At this crisis in his life the strong boy does not stop an instant to argue with conscience, for each moment the grip is tightening.

He exerts his strength.

What happens?

He is free!

The world cheers him. God helps him. He can go now with Daniel to the lions' den; to any fiery furnace of temptation. He knows his danger and his power. It takes a strong boy to say "No" when he is tempted to do what he would like to do but should not; to stand firm and still when provoked and taunted; to hold himself in hand when passions become wild horses and try to run away. Such a boy is bigger than Napoleon, or Grant.

He that ruleth himself is greater than he that taketh a city.

Who is the strong girl? She who believes in that kind of a boy!—Pluck.

DO NOT NEGLECT YOUR KIDNEYS

Because If Kidney Trouble Is Permitted To Continue Fatal Results Are Sure to Follow

Weak and unhealthy kidneys are responsible for more sickness and suffering than any other disease, therefore when through neglect or other causes kidney trouble is permitted to continue, *fatal results are sure to follow.*

We often see a relative, a friend, or an acquaintance apparently well, but in a few days we may be grieved to learn of their severe illness or sudden death, caused by that fatal type of kidney trouble—Bright's disease.

DOCTOR AFTER DOCTOR

"None of Them Suspected that My Kidneys Were the Cause of My Trouble"

Among the many famous cures of Swamp-Root investigated, the one published this month for the benefit of the FARM AND FIRESIDE readers, speaks in the highest terms of the wonderful curative properties of this great kidney remedy.

VINTON, IOWA, July 15th, 1901.

In the summer of 1893 I was taken violently ill. My trouble began with pain in my stomach, so severe that it seemed as if knives were cutting me. I was treated by two of the best physicians in the county, and consulted another. *None of them suspected that the cause of my trouble was kidney disease.* They all told me that I had cancer of the stomach, and would die. I grew so weak that I could not walk any more than a child a month old, and I only weighed sixty pounds. One day my brother saw in a paper your advertisement of Swamp-Root, the great kidney remedy. He bought me a bottle at our drug-store, and I took it. My family could see a change in me for the better, so they obtained more, and I continued the use of Swamp-Root regularly. I was so weak and run down that it took considerable time to build me up again. I am now well, thanks to Swamp-Root, and weigh 148 pounds, and am keeping house for my husband and brother on a farm. Swamp-Root cured me after the doctors had failed to do me a particle of good.

Gertrude Warner Scott

Swamp-Root will do just as much for any housewife whose back is too weak to perform her necessary work, who is tired and overwrought, who feels that the cares of life are more than she can stand. It is a boon to the weak and ailing.

MRS. GERTRUDE WARNER SCOTT

How to Find Out It used to be considered that only urinary and bladder troubles were to be traced to the kidneys, but now modern science proves that nearly all diseases have their beginning in the disorder of these most important organs.

The kidneys filter and purify the blood—that is their work. Therefore when your kidneys are weak or out of order you can understand how quickly your entire body is affected, and how every organ seems to fail to do its duty.

If you are sick or "feel badly" begin taking the world-famous new discovery, Dr. Kilmer's Swamp-Root, because as soon as your kidneys are well they will help all the other organs to health. A trial will convince any one.

Women suffer untold misery because the nature of their disease is not always correctly understood; in most cases when doctoring, they are led to believe that womb trouble or female weakness of some sort is responsible for their many ills, when in fact disordered kidneys are the chief cause of their distressing troubles.

Nervousness, headache, puffy or dark circles under the eyes, a dragging pain or dull ache in the back, weakness or bearing-down sensation, profuse or scanty supply of urine, frequent desire to pass it night or day, with scalding or burning sensation—these are all unmistakable signs of kidney and bladder trouble.

If there is any doubt in your mind as to your condition, take from your urine on rising about four ounces, place it in a glass or bottle and let it stand twenty-four hours. If on examination it is milky or cloudy, if there is a brick-dust settling, or if small particles float about in it, your kidneys are in need of immediate attention.

When the heart is acting badly, have you ever thought that it may be due to kidney trouble, as is often the case?

Other symptoms showing that you need Swamp-Root are sleeplessness, dizziness, sallow, unhealthy complexion, plenty of ambition but no strength.

Swamp-Root is pleasant to take and is used in the leading hospitals, recommended by physicians in their private practice, and is taken by doctors themselves, because they recognize in Swamp-Root the greatest and most successful remedy.

If you are already convinced that Swamp-Root is what you need, you can purchase the regular fifty-cent and one-dollar size bottles at the drug-stores everywhere. Remember the name, Swamp-Root, Dr. Kilmer's Swamp-Root, and the address, Binghamton, N. Y.

Sample Bottle Sent Absolutely Free by Mail

SPECIAL NOTICE.—Swamp-Root, the great Kidney, Liver and Bladder remedy, is so remarkably successful that a special arrangement has been made by which all readers who have not already tried it may have a sample bottle sent absolutely free by mail. Also a book telling all about kidney and bladder troubles and containing many of the thousands upon thousands of testimonial letters received from men and women cured by Swamp-Root. In writing, be sure and mention reading this generous offer in the FARM AND FIRESIDE when sending your address to Dr. Kilmer & Co., Binghamton, N. Y.

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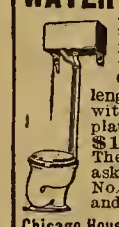

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Cast Iron Roll Rim Bath Tubs, length 5 ft. Complete with full set of nickel plated fittings, each, $11.00.

They are new goods, ask for free catalogue No. 34 on plumbing and building material.

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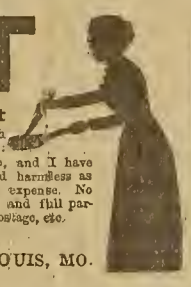

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Neglected Max

By MARION BRIER

I had only occasional glimpses of Max. It was like reading a paragraph here and there in a book, but it was enough to deeply interest me.

Crippled by an accident when I was still a child, my life has had to be lived chiefly between the four walls of my room, each day but a repetition of the last—a weary, painful, monotonous existence—and it seemed at times unbearable.

Perhaps it is this poverty of my own life, lived within its narrow, uninteresting limits that has made the few glimpses of other and freer lives, that have come to me through the window that always frames the outside world to my view, of such interest.

The first break in the long monotony of my life since the cruel accident that has chained me a prisoner so long came one day a dozen years ago, when my brother appeared at the old home, and announced his intention of taking me back with him to spend a month in his home in the small city of Grenville.

I looked forward to the journey with keen pleasure, but alas! when it came to the reality it brought with it so much of pain and suffering that I could not enjoy the fleeting glimpses of the outside world with all its varied interests that flashed by me.

But the next afternoon I sat by my open window, thoroughly enjoying the new sights and sounds that came to my unaccustomed eyes and ears like novelties from a strange world.

Then it was that I first saw Max. He was racing up and down the lawn in front of the next house. He was a merry-faced, active little fellow with long, flaxen curls flying in the wind under his jaunty little red cap, and he made a bright bit of color in his picturesque little suit of red velvet against the green lawn, and my eyes followed him admiringly. Back and forth he raced, his little feet in their dainty red slippers scarcely seeming to touch the ground.

My attention was called away for a few minutes, and when I looked again he was standing close by the gate, his little face pressed against the bars, looking wistfully through at the busy street without.

Presently a stray dog, lean and gaunt-looking, stopped outside the gate and looked up into his face with appealing brown eyes.

Max was interested immediately. "Poor doggie!" he said, pityingly. "Are you hungry, doggie?"

The forlorn-looking little dog gave a sharp bark of assent, and stood waiting expectantly, the soft brown eyes never moving from Max's face.

"Just you wait, doggie, and I'll get you something to eat," Max exclaimed, giving the shaggy head an encouraging pat through the bars. Then he scampered away in the direction of the kitchen. In a moment he came trotting back with a great slice of cake in his chubby hands. This he proceeded at once to feed to the half-starved dog, talking to him meanwhile in the most sympathetic tones. The dog gulped the delicious morsels down eagerly, greatly entertaining Max by his dexterous catching of each small piece between his sharp little teeth.

Before the last crumb was gone the door of the house opened, and a tall, stylishly-dressed lady passed out and down the walk. She frowned in an annoyed way when she saw Max and the dog. "Maxwell Harding! Such a tiresome boy as you are," she exclaimed, taking him impatiently by the arm. "Get away from here, you horrid dog!" she continued, stamping her foot at the second offender.

"But, mama," cried Max, impulsively, "he's awful hungry. I want to just give him the rest of this. Please, mama."

"Hungry! He'll have to stay hungry then. Just look at your suit! Crumbs all over it! And your slippers are all scuffed on the side. You march into the house now, and don't you stir outside again to-day. Such a provoking child I never did see!" and she passed on out of the gate and up the street.

Max gave one last look toward the shaggy little dog, then with lagging feet and hanging head went slowly into the house, a very forlorn looking little figure.

Day after day I watched for the little fellow after that, and his chubby face held the chief interest of the days for me. He was always alone, and always dressed in charmingly picturesque little suits. But there seemed to be nothing the little fellow was permitted to do. If he brought out anything to play with, his mother's voice was heard from the porch, where she sat sewing, sharply reproving him for soiling his clothes, or for mussing up the lawn if he ran up and down the walks, the same voice bade him stop scuffing out his shoes; so the little lad wandered about forlornly. He spent hours standing by the gate. I often saw him looking wistfully through at the life outside.

He usually stood there when his father, a stern-looking business man, came down the walk. Max's round, chubby face would light up as he caught sight of his father. He would watch him all the way down the street, and, when the gate opened, the blue eyes under their long, curling lashes would be raised appealingly to his face, but the stern face of the business man never softened. He never seemed to see the pleading little face as he pushed the little fellow carelessly out of his way and passed on up to the house. Max would look after him a moment with quivering lip, then turn and press his face again to the bars of the gate, watching to find something of interest outside.

He often crept up to his mother's side, as she sat sewing on the porch, and looked wistfully up into her face. Sometimes he would timidly venture a remark. The only answer I ever knew him to get was an impatient, "Don't bother me, Maxwell. Do run away."

My visit soon came to an end and I was once more shut within the four walls of my home room. In the weeks and months to come I thought often of Max's wistful little face. But it was seven long years before I again made the trip to my brother's house.

Almost my first thought, when my brother wrote that he would come for me the following week, was to wonder if I would see Max, and what he would be like.

The first day that I could sit by the window I watched eagerly for him. Just as six o'clock struck I was rewarded by seeing a slender, boyish form turn in at the gate. Could that tall boy of thirteen be the little Max of seven years ago? I looked at his face anxiously. His was a merry, impulsive face with the same honest blue eyes shaded by their long lashes. Yes, it must be Max.

The door closed behind him and I sat wondering how it had fared with the little fellow since I last saw him. Twenty minutes later the door opened again, and Max reappeared, sprang down the steps and walked briskly down the street. I watched him as he passed, the slight, boyish figure straight as an arrow, shoulders thrown back, and head erect. I listened to the firm, light tread and to the merry whistle that floated back until they were lost in the distance.

The pain which has kept me constant company for so many years seldom allows me to sleep until the wee sma' hours of the night, so I often sit by the window during the long weary hours that I may have the companionship of the silent stars. That night as usual I sat counting the slow hours away. Nine, ten had struck, and I thought it must be nearly time for eleven, when I again heard the merry whistle and the light, quick step that I had quickly learned to recognize as Max's. The gate clicked; the boy ran lightly up the walk and disappeared in the house.

As the days passed by I caught only occasional glimpses of Max. At meal-time he would appear, run up the steps and disappear within for a few minutes, and then he was off again. Night after night between ten and eleven o'clock I would hear his merry whistle, followed by the click of the gate as he entered.

I was troubled; for I had become quite deeply interested in the bright-faced boy, and it did not seem right to me that a boy of his age should be on the street all the time.

One evening I sat in the twilight by my window, as I sometimes loved to do, when it occurred to me that I had not seen Max leave the house after dinner; so I looked across into my neighbor's sitting-room to see if he was there. Mr. Harding's house stood only a few feet from my brother's. The curtains to the window just opposite my own were never drawn, and I could see in distinctly, but the room and its occupants had never interested me. There Mr. Harding always sat in his easy-chair, hurled behind his newspaper, while Mrs. Harding was usually in her small rocker with book or fancy work.

This evening they were in their usual places, and I was just turning away again when the door opened and Max stepped in. He stood, cap in hand, just inside the door, looking somewhat timidly toward his father. Mr. Harding emerged from behind his paper and bent a pair of stern, frowning eyes upon the boy. After what seemed five minutes of ominous silence, he began to speak. It was a still evening, and the harsh tones of his voice came distinctly through the open window. I concluded that Max had been in some more audacious piece of mischief than usual, and that it had been reported to his father. Hence the interview.

Max made no attempt to excuse himself. The boy stood where the electric light fell full upon his face. I could see the wistful look upon it, and the tremble of the boyish lips. I knew the heart was tender, and could easily be touched and guided aright. But Mr. Harding seemed to see none of this. He evidently looked upon his son as a hardened reprobate. His voice rose as his choler increased, and I could not avoid hearing scraps of his bitter denunciation.

I could see Max shrink as from blows as the cruel phrases struck him. "Ashamed of such a son"—"A disgrace to his name"—"Reform-school the best place"—"A good-for-nothing vagabond."

A few minutes later Max slipped out of the house, and came and threw himself face down at the roots of a great oak-tree only a few feet from my window. I could hear the bitter sobs that would come thick and fast though he tried hard to stifle them while he moaned, "If he only cared! He don't care a bit for me if only his name isn't disgraced."

How I longed to comfort the boy; but I was powerless, he must bear the bitterness alone. At last the storm of emotion spent itself and he grew quieter.

He lay there under the tree a long time, motionless. At last he raised himself, and, leaning back against the trunk of the tree, clasped his hands behind his head while he looked afar off into the starry sky. "I guess father had reason to be disgusted with me," he said, slowly. "But I'll make him proud of me yet." There was a determined ring in the boyish voice that I liked. Then there was silence for a long time again. At last he got up and went slowly into the house.

The next evening Max did not leave the house after dinner, and a little later I saw him enter the sitting-room where his father and mother were already busy reading. He looked around aimlessly then came over and sat down by the window. Soon his fingers began to drum on the sill.

Mrs. Harding looked up irritably, "Do stop that noise, Maxwell. You make me nervous."

Max took his hand from the sill, and walking over to the bookcase, looked the books over; evidently there was nothing there attractive to the boy and he turned away.

Mr. Harding frowned at him over the top of his paper, "Can't you sit down and keep still," he growled.

Max took a book and sat down, but I could see that it held little attraction for him. He fidgeted; he watched the slow hands of the clock; he looked out of the window into the darkness; and every uneasy movement brought a frown to the stern face behind the newspaper.

"Maxwell, you are certainly enough to drive one wild with your fidgeting around," his mother finally exclaimed.

Max moved over to the couch, then, and stretched himself upon it.

"Maxwell, do take your feet off that couch," his mother exclaimed again.

Max got up at that, and glancing at the clock, went off to bed. His father and mother settled back to reading with a relieved air.

For a week, each evening was but a repetition of this one. Max fidgeted the hours away, at an utter loss what to do with himself, and evidently nearly drove his parents distracted.

At last one evening about nine o'clock he slipped out of the door, and coming over to the old oak, threw himself once more under its wide-spreading branches and disconsolately kicked the fallen leaves.

"What's the use of trying?" he burst forth presently. "Nobody cares, no matter how hard I try. I just bother them in the house by staying at home. Nobody wants me here. Well," he went on, a new tone in his voice, "I know who does want me; the fellows 'ud be glad enough to see me. And I'm going," he suddenly added; "and if we don't have some fun to-night it won't be my fault!"

He threw back his head, gave himself a quick shake as if to throw off something disagreeable, sprang up, lightly bounded over the fence and was gone into the night.

The next day I returned home, but the memory of Max remained with me. The boy's disappearance into the darkness that night had made a strong impression upon me that I could not shake off. Perhaps I sympathized with him more strongly, because I realized so well how prison-like four walls could become, and how an unsympathetic atmosphere could work upon the nerves.

Well, five years later I was again back in the large, bright corner-room of my brother's house. As before, almost my first thought was to see Max. I watched eagerly from my window. Directly after dinner I saw a tall, slight young man of about eighteen years leave the house. I looked at him eagerly, then shook my head. That disreputable-looking young man, who slouched along the street with a hang-dog air, vigorously puffing a cigarette, was certainly not Max.

Of my brother, coming into the room just then, I hastily asked, "Is that Max Harding?"

My brother looked out of the window, and, with a shake of his head, said, "Yes, that's Max, and a tough young scamp he has grown to be, too. They expelled him from school last year, and all the decent families have forbidden their boys to have anything to do with him. He spent one night in the lockup. He drinks and gambles and carouses generally. He loafs around all his time. He has tried to get work several times, to be sure, but of course no one will hire him."

Just then a little fellow on crutches came out of the house just opposite, and gave a shrill little whistle. Max was already half a block off, but he turned quickly at the sound and gave an answering whistle clear as a flute.

The little fellow shouted in a thin piping voice, "Come here, Max."

"Can't, Vi, I've got to go down town," called back Max.

"Oh, please, Max, I do want you so," cried the thin little voice with a sound of tears in it.

"Well, all right, old man, here I am at your service," answered Max, good-naturedly, throwing away his cigarette and bounding across the road.

"Who is it?" I inquired.

"That's Mayor Wendell's little crippled son, Levi," answered my brother. "He's taken the most unaccountable fancy to Max, and clings to him like a little burr. And really Max is good to him; he spends hours amusing him. He even throws his cigarette away, because it makes the little fellow cough; it's the only time any one ever sees him without the weed in his mouth. But what Mayor Wendell can be thinking of to let Levi be with that scamp so much I can't see. I wouldn't let a child of mine have anything to do with him."

My heart was very sore as my thoughts went back to the sunny-faced child who had won my interest a dozen years ago. I could not bear to think that he had developed into this hard-faced young man.

I could not sleep that night. Max's face haunted me. I turned restlessly from side to side, and counted the hours. A little after three o'clock I was startled by a great gleam of light from Mayor Wendell's house across the street. Before I could realize what it meant the dread cry of "Fire! Fire!" rang out from the street. Instantly all was confusion. My brother came in and helped me to my chair by the window, then rushed off to see if he could be of any help.

The fire-engine came rushing down the street behind the galloping horses; crowds of men and boys with a sprinkling of women and girls came running from all directions.

The fire-company worked swiftly, but the flames had the start of them, and were even more swift. In a few moments the house was a furnace—the fierce, red flames bursting from every window.

Suddenly a wild shriek rang out. "Vi! Vi! Oh, my boy's in there! My boy's in there!" and the agonized mother fell fainting into her husband's arms.

The crowd stood as if paralyzed. The firemen shook their heads, brave boys though they were. It was almost sure death within those walls.

Like a flash I saw a slim, wiry form rush through the crowd, spring up the steps and disappear in the furnace within. I caught one glimpse of his face in the strong light; it was Max. I clenched my hands and waited breathless for what seemed ages. The crowd below seemed turned to stone as they stared helplessly after him. The flames raged pitilessly, wrapping their cruel tongues round and round the doomed building.

Out of the fiery horror stumbled Max, coatless, hatless, the flames licking up his fair curls, and winding cruelly about his bare arms, but he held Vi safe in his arms, wrapped in his own coat.

Willing hands caught the little cripple from his arms, and a mighty shout arose from the great crowd, but it froze on their lips as Max blindly staggered and before helping hands could reach him fell down the steps; the poor, blistered head struck the cruel stones, and Max lay white and unconscious.

Tenderly he was lifted up, and carried to his home. They laid him on the broad couch, where his boyish feet had never been allowed to rest before.

The father walked the floor in agony. The mother knelt by the couch in hysterical weeping.

"Oh," I thought bitterly, "a little of that anxiety, a tenth part of that father-love and mother-love given him when he needed it so sorely would have made another boy of Max, but it cannot help him now."

Max lay in a heavy stupor hour after hour, his scarred face motionless on the pillow.

The city rang with his praises. The papers printed eulogies of "Our Young Hero." Dozens of people turned in at the gate, some carrying flowers, some carrying jellies and broths, some tiptoed in silently to stand a moment looking down at the scarred face, then to tiptoe away as if they had looked upon something awe-inspiring; others went only to the door with anxious inquiries. But the blue eyes that had so often looked wistfully for a friendly glance were blind to them all; the ears that had listened eagerly for a word of recognition of his best efforts were deaf to the praises spoken now; the boyish heart that had been so hungry for mother love and father interest was indifferent to both now.

"Oh, Max!" I cried, stretching my arms out toward the silent form. "Max, they do love you. Come back and know that they do!"

But the love came too late. The recognition of the nobility of the boy's soul came too late.

On the third day after the fire, just as the western sun was sinking in a mass of crimson glory, the blue eyes opened, gave one wondering look at the faces clustered about him, then closed forever.

Build as thou wilt, unspoiled by praise or blame,
Build as thou wilt, and as thy light is given;
Then, if at last the airy structure fall,
Dissolve and vanish, take thyself no shame—
They fail and they alone who have not striven. —Thomas Bailey Aldrich.

Pensioners of the Sea

BY FRANK H. SWEET

After the tide comes in at La Pointe there is a period of rest, and the waves only rise and fall with the throbbing of the great sea-heart; then the water begins to fall away, slowly and reluctantly at first, then swiftly and silently, as though what must be done would best be done quickly.

So it was with Jean Perrete. He had been one of the strongest and most successful of the La Pointe fishermen. He was daring, even to the verge of rashness, and conversant with all the best methods of salting and drying. He had spent a month in the great fish-markets, and learned enough to make him shrewd in his dealings with the wily merchants beyond the Channel. He purchased his salt in bulk, and never sold fish that he was not sure would give satisfaction. His boat was among the first to leave for the shoals, and generally the last to return. And his strength and knowledge were always at the disposal of his less fortunate neighbors.

It was natural that Jean Perrete should prosper. Almost before he reached manhood his old boat was exchanged for a new one from the great firm of Polonceau. Then he sold his little house near the fish-stalls, and built a larger one on the hillside back of the hamlet. This overlooked the harbor, and gave him room for a small garden and a tiny stable and pen. Around the house and the stable and the pen he built a strong fence, and into the house he put a fine lot of furniture, which he brought from St. Pon de Leon in his boat, and into the stable he put a cow with a white star on her forehead, and into the pen he put two little white pigs, which he brought from somewhere up the Channel. This done, he stood back and surveyed his work critically, but something seemed to be lacking, so he went away and brought a dozen fine pullets and a rooster that carried his head so high he stumbled when he walked. The rooster showed his acceptance of his new quarters by mounting the stable and crowing defiance to the neighborhood generally.

By this time the neighbors began to look at each other sagaciously, and nod their heads. Of course, what else could it mean? It was what they had been expecting ever since he began to build the house. What would a fisherman want with a cow and pigs and hens if it was not for that? He could not look after them when he was away on his long fishing trips. It was foolish to make a secret of anything so plain.

Jean met their wise looks calmly and went on with his work until everything was arranged to his satisfaction. Then he hired an old woman to look after the cow and the pigs and the hens, and took his boat and sailed out of the harbor. The neighbors watched the sail vanish into the horizon and gazed at each other blankly. It was the breaking up of all their conjectures.

But one day Jean returned, and with him was a fair young girl, whose eyes were as blue as the sea in mid-autumn, whose lips were a gracious blending of sweetness and decision. Jean took her directly to his home on the hillside, and a few days later there was a reception that brought together all the people of La Pointe and the outlying farms. But among all the young girls who took his hand that day Jean saw no one as sweet and gracious as the fair young bride he had brought from St. Nazaire.

The weeks and the months went by, and it came time for the fleet to return to the shoals. Therese accompanied Jean to the wharf, and then went up on the headland and watched his sail until it disappeared in the mist. There were others on the bluff beside herself—old women and young women, and little children who were led by the hand—and when they returned to the hamlet they walked apart and were silent; some of the women were crying under cover of their aprons. Therese did not cry, but on her face was a look that made the little children touch her dress softly as they watched her with their big, wondering eyes.

All through the long summer months she looked after the cow and the pigs and the hens, and made fragile little things to adorn the house. In the morning she worked in the garden, or among the flower-beds that Jean had arranged for her. Sometimes she went down to the beach and brought back a basket full of fish, or a lobster, or perhaps some of the curious seaweed that coast-women know so well how to cook. In the afternoon she sewed, or made the delicate lace that is so famous at St. Nazaire. And sometimes, when the days were long and dreary, she made low, plaintive music on the little cottage organ she had brought from her home on the Loire.

But in the evening she always went up on the headland. There she gazed out over the dreary reach of water, and into her eyes would come an infinite longing and tenderness, and sometimes she would stretch out her strong, supple arms as though she would cleave the distance and draw her loved one from the dangers of the awful shoals. But only the dull, sullen roar of the breakers would come to her. After a while her arms would fall drearily to her side. She would then walk back and forth, back and forth, and listen to the weird song of the breakers, and think of the raging waters that surrounded the fishing-grounds. And only when the darkness came, hiding the sea from her sight, would she return to her lonely home on the hillside.

At length the air grew chill, and heavy masses of clouds began to drift down from the stormy northwest. The roar of the breakers grew louder, and white-capped waves could be seen far out at sea. The summer birds disappeared, the trees lost their leaves. Then the women began to make frequent trips to the headland. It was time for the fleet to return.

But again and again they came back with sad eyes. No sails were in sight. The clouds became storms; the storms grew thick with snow and ice, and were hurled against the houses of La Pointe by the fierce winds of the pitiless northwest. There had been nothing like it for years, and the women looked at each other with growing terror in their white faces. Every year the shoals had claimed victims from the fleet—what would it be this year?

One day they saw a little weather-beaten vessel coming into the harbor. Her sails and spars were shattered, her bulwarks stove, her flag at half-mast. From deck to cross-trees, from shroud to shroud, from stem to stern, she was covered with ice—her very sails were coated with it. The women gathered about the landing-place in silent dread. Whose boat was it? What tidings did it bring?

Before night the story was known to all the children of La Pointe, and they gathered in groups and discussed the dreadful things the fishermen had seen. They spoke in whispers of the two vessels that had crashed together and gone down with all on board; of the large fishing-schooner drifting to leeward, bottom up; of another lying on her beam-ends, with part of her crew clinging to her ice-covered sides, and the rest swept away; of the two men rescued from a drifting spar; of their own men carried away by the terrible seas that had swept the vessel.

But the women did not talk. They wandered along the beach, and into their houses, and back again to the beach, and up to the headland. Their faces were white and their lips silent. They heeded not the rain splashing their faces and stiffening into ice upon their clothing. All through the day and all through the night they watched and waited. The suspense drove the blood from their faces, leaving their eyes inclosed by dark circles and their lips white and drawn. Young women lost their youth, and old women aged from hour to hour. Out of the darkness came only the rush of the storm and the roar of the breakers upon the reef and the wild beating of the hail upon the rocks.

The next day another battered vessel came into port, and the next another and another. At the end of a week nearly two thirds of the fleet had returned, but each vessel brought its own tale of disaster and loss—joy to one household and sorrow to another.

And all this time Therese wandered from group to group, from her house to the beach, speaking to this one and to that and trying to smile now and then, but with a look in her eyes and a quiver on her lips that made the women look at her tenderly and the men turn away with a choking sensation in their throats.

One morning a small wreck drifted into the harbor, and in it were two men who were nearly dead from cold and exposure, but when they saw the white, eager face of Therese bending over them they began to speak hurriedly. They had seen Jean but a few hours before, they said, and had spoken with him, but had been too weak to offer assistance. His boat was drifting outside.

Therese did not wait for them to finish. With a great light in her eyes she hurried to the wharf, but strong men were there before her, and when she sought to enter the boat they put her gently back. If Jean was to be saved, they said, it was their part to do it. She would only be in the way.

Oh, the long hours that followed! None of the waiting had been like that. Up the beach and down, up and down, her fingers clasping and unclasping, and her face growing sharp and expectant. When the boat drew near she did not wait for it to land, but sprang forward with a sudden whitening of her face. Several recumbent forms were there, and one of them was Jean. Motioning the fishermen back with a quick, imperious gesture, she leaned over the boat, and with the icy waves curling about her ankles, lifted the unconscious form in her strong, loving arms. Then she ran up the beach and across the white sands, swiftly, fiercely, as if she feared the black waves would sweep up and complete the work they had almost accomplished. The fishermen and their wives stood back and gazed at her wonderingly. What miraculous strength the good God gave to his creatures in times like this!

After a while some of the women followed her up the hillside. Jean was in bed, sleeping peacefully, and on the floor beside him was Therese, her face buried in the bedclothes, and her form shaken by wild, passionate sobs—the first since his departure in the spring. The women gazed at her a moment, and then closed the door softly and went away.

When the doctor came he looked grave. "Too much cold and exposure," he said. Jean might recover in time, but the process would be slow and uncertain. He must have nourishing food and constant attention.

And now it was that the tide of Jean Perrete's fortunes began to go out swiftly and silently. There was little ahead, and Therese was lavish in her expenditures for his comfort. First the pigs went, and then the cow and the hens, and after a while articles of furniture from the house. When Jean was able to sit up, he began to notice empty spaces in the rooms, but he said nothing. Only his eyes would follow Therese wistfully, and every day he would make vain endeavors to regain the use of his poor, rheumatic limbs; then he would talk of the time when he could return to the shoals.

One terrible day a man came with a paper for them to sign. The paper conveyed the information that if they did not pay a certain sum of money within a certain length of time the house would no longer be theirs; but when the man went away he left a roll of bills upon the table. Therese slipped outside a moment to choke back the sobs in her throat, so that Jean might not see, but when she came back she found him crying—not as women cry, with low, repressed shudders, but with strong, convulsive sobs that shook his weak frame and made her move to his side, throw her arms around his neck, and press her cheeks against his; the sobs she had driven back a moment before now returned unchecked and filled her eyes and choked her voice.

Yet in spite of all this she was happy. What mattered the house and the cow and the pigs and the hens, so long as Jean was growing stronger every day? What mattered anything so long as they had each other? If necessary she could go out with the lobster-women and earn enough to keep them from starving.

So she laughed and sang at her work. When the shadows grew thick on Jean's face she kissed them away, and petted and chided him until gladness and courage returned to his eyes.

One morning he walked to the door, and the next morning went as far as the gate. After that they took little walks every day, he on his crutches, and she by his side watching every movement, and with her arms ready to assist at a moment's notice.

With the return of warm weather they extended their walks as far as the beach and the headland, going very slow and stopping frequently on the way to rest. Sometimes Jean grew fretful at his slow recovery, but Therese was always with him, and her ready tact kept him from dwelling too much on his misfortune.

By the time the fleet returned in the fall he had exchanged his crutches for a cane. Every afternoon now he and Therese went down to the beach and watched the fisherman prepare their "catch" for market. He knew all the best methods of drying and salting, but so far had always been too busy to make experiments. Now as he watched them day after day many possible improvements occurred to him. One afternoon a sudden, pleased look came into his face, and he took pencil and paper from his pocket and began to make sketches and figures. On their way home he was silent and preoccupied. In the evening he took out his paper and pencil and worked far into the night. At last he called Therese to his side and made a few eager explanations.

"Why, Jean!" she cried, as she grasped his idea; "it is wonderful! It will revolutionize the whole process."

"Yes. It will make a great change," he agreed. "It is odd that no one ever thought of it before." Then he looked at her with a wistful expression in his eyes. "But it will not help us, Therese. We have no fish, and no prospect of getting any. I spoke with the doctor on the beach to-day, and he said I would never get over being lame—that I could never return to the shoals. The only thing left me is a possible job in the stalls—poor work, but it will keep us from starving."

"Jean!"

"Yes, dear, I know," said he, looking at her with a wan smile; "I am not complaining. Heaven has been good to us, but the future is not pleasant." Then he turned to his sketch-covered papers with a sudden effort. "I will finish this, and to-morrow I will show it to some of the leading men. It will nearly double their season's profits."

Therese placed her hand upon his arm. "No, you will not show it to them," she said, quietly. "It wouldn't be right. Your discovery is valuable, and will affect the fishing of the entire coast. The season has been good, and the fishermen have made money. You have not prospered. It would not be right for you to give your discovery to them when you need it so much more yourself."

"But what shall I do with it?" he asked, curiously.

"Have it patented, of course."

"But that will cost money, and we have none to spare. Besides, what can a poor

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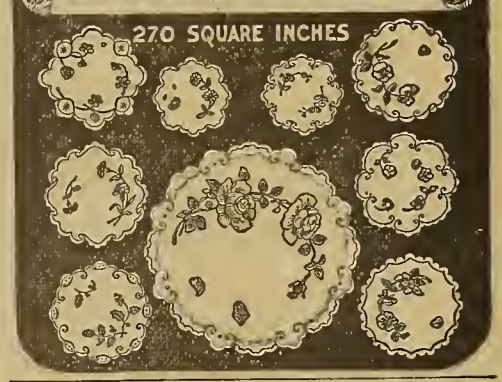

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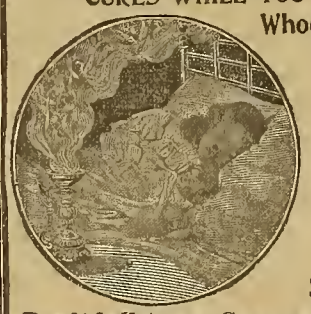

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La Pointe fisherman hope to obtain by such an ambitious flight?"

Therese bent down and kissed him. "You go on with your work," she said smiling. "I will look after the money."

The next day she went out alone. When she returned she placed a roll of bills in his hand.

"For the patent," she said. "I have sold the organ and the violin my grandfather gave me. The man will come after them to-morrow."

Jean half rose to his feet. "Your precious violin!" he exclaimed. "Oh, Therese!" Then as he looked into her tranquil eyes he sank back with a stifled groan.

"Well, so be it. I hope the patent may be worth the sacrifice."

A few days later he finished the drawings and sent them away. Then he went down to the stalls and obtained a temporary job with the fishermen. The work was light and the pay correspondingly small. But it helped to meet their expenses.

They had very little money now. The doctor's bill and the medicine had taken most of it; what was left grew smaller every week, but with Jean's help it must last until spring. Then the mortgage would come due, and—well, they would have to go elsewhere and begin again. Jean had to give up work when the snow and northwest wind came. Exposure brought back the rheumatism. Therese then began to do small jobs among the neighbors and earn occasional francs, but they had no luxuries for the table now, no extra clothing for the bad weather and sometimes they did not even have a fire.

One day a letter came, but it was only from the lawyer. Jean answered it with a gloomy face. There were many questions, but not even one word of encouragement.

At length the weather grew less severe, and one morning they saw a crocus smiling at them from a fence-corner. Soon after they heard a peculiar trill that could only be made by a summer bird. A few more weeks and warm weather would come, and they looked at each other and smiled. They shuddered as they thought of the few weeks remaining before the mortgage would be due, then—then they must leave their home never again to return.

But even the tide of a fisherman's fortunes cannot ebb forever; at some time it must turn and flow back.

One day Jean received a letter. He showed it to Therese. They looked at each other and laughed, and a sparkle came into their eyes, and the rich color began to flow back to their cheeks. But after all it was only the patent-papers, and it was food and clothing and money they needed.

However, people are quick to adopt an improvement. A few days later they received a magazine, and in it was an account of the new invention that was to revolutionize the fishing industry. There were illustrations and explanations that occupied an entire page.

Within a week Jean began to receive offers and propositions—one, two, a dozen of them—any one of which he would have accepted but for the wise shake of the head that was bending over his shoulder.

"Wait," she said, "your patent is valuable. You must not be hasty."

One day a keen, gray-haired man stepped briskly from the stage-coach and inquired for Jean Perrete. He did not go away until the next morning. When he left he was owner of half of all the rights and privileges of the new invention, but with Jean Perrete he left a check that represented more than a lifetime of industry on the shoals, and Jean gazed at the check and at Therese as though he were in a dream. But Therese did not look surprised. "It is only what I expected," she said, with a luminous light in her eyes.

ACTOR EMPHASIZING NEED OF BETTER SANITARY CONDITIONS

Some Curious Customs of Rural Japan

[CONTINUED FROM PAGE 3]

HOW HORSES AND BULLOCKS ARE SHOD

The Japanese are nothing if not ingenious. It is quite true that a great invention that has revolutionized the commercial or industrial world has never found a birthplace in the otherwise fertile brain of the Oriental. No matter how long or difficult the task at copying anything, if skill of fingers and patience can accomplish the end, it is certain to be achieved. Their special capacity may be noticed in the rural districts more than in other parts, possibly because that parent of so much effort—necessity—is ever upon them. Among the many uses to which rice-straw is put, none is more novel than that it should become the popular material with which to shoe their beasts of burden, horses and bullocks. "The Village Blacksmith" would be impossible in Japan, for there is nothing to "smith," and if there were, nothing could be found with which to do it in all the country-side. Some bright mind hit upon the idea of making the same kind of straw-shoes for cattle as those used for the jinrikisha runners. They are woven in a peculiar manner, making them very strong, and are kept on with twisted straw-rope. The ties are brought through the opening in the hoof and carried to the back, while the back ones are drawn forward and securely fastened, protecting the entire foot of the creature from the stony roads. I once saw the process of adjusting the shoes, which I count as among the most amusing things I ever witnessed. A bullock was required in great haste to do some unexpected road-work. He chanced to be attached to a plow, wading through the soft mire of a rice-field, but was quickly brought to the narrow pathway, where several men were standing, and calling upon the driver to hasten his steps. As soon as the creature had landed from the flooded field the men each seized a dripping leg and tried to accomplish the feat of putting on all four of the shoes at the same moment. The result can easily be imagined. These crude substitutes give perfect satisfaction to the farmer, and serve the purpose for the beast.

Simplicity in Table Decorations

Elaborate and expensive floral centerpieces are not necessarily the most beautiful. Simplicity often rules the worlds of Art and Nature. Who would consider as beautiful, at first thought, a few sprays of the leafy growth of the garden-asparagus together in a small vase with a like number of golden Coreopsis? The effect is charming if the vase also be simple. This should be remembered, that a vase of flowers is intended to display the beauty of the flowers, not man's handiwork in molding or coloring the vase.

The umbels of white flowers of the wild carrot are very pretty in vase decorations, yet how few persons would think of gathering them for that purpose!

While it is a benefaction to man to have at command, for use and proper enjoyment, all the beautiful things possible, it is foolishness to trample aside a host of pleasing things merely to strive for the elusive and unattainable or imaginary beauties. The writer does not lack praise for rare beauties, but rather deplores the tendency to look over and beyond Nature's abundance in the fields and along waysides.

Did you never pull a flower of the wild carrot? The tenacious fiber of the stem requires a pull. Did you never smell of its peculiar fragrance—if fragrance it may be termed? Note the odd, concave form of the umbel—like a good-sized butter-plate.

There is much in Nature for us to learn and appreciate, and in our observations we come to know her better, we learn to love her, and that feeling will embrace our fellow-men. Let us, then, bring her simplest charms to our hearts and homes, without fear of missing something more rare and beautiful beyond.—Meehan's Monthly.

Remember thee?
Yea, from the table of my memory
I'll wipe away all trivial fond records,
All saws of books, all forms, all pressures past,
That youth and observation copied there;
And thy commandment alone shall live
Within the book and volume of my brain,
Unmix'd with baser matter.
—Shakespeare.

How Old Hicks Saved the State

A farmer out in Renville whose name was Grandpa Dix
Had never dared ter plant his corn without consultin' Hicks.
Now Hicks lived in Mizzoury, and he had a kind o' knack
Of makin' up the climate in a blamed old almanac.
Whenever it came winter and the winds began ter blow
Ol' Hicks came out hotfooted an' predicted that it would snow.
And along in Janooary his advice was free and bold
"About this time of year look out for long-continued cold."
And when the cold began to break and spring showed up a bit
Ol' Hicks said, "Spring is coming," and he always made a hit.
Now, Grandpa Dix he had a way, whenever Hicks said spring,
Of hustlin' out upon the land, and he never did a thing
But plant his corn and sow his wheat, likewise his garden sass,
Because whatever Hicks had said was sure ter come ter pass.
One year about the fust of March the almanac said "warm,"
When the blame ol' gov'ment weather sharp predicted "serious storm."
But Grandpa Dix he belt his ground and planted all his stuff,
Yet notwithstandin' Hicks's graft the storm came, sure enough.
But every pesky Hessian fly, chinch-bug and like of those
Air varmints that eat up the stuff was very badly frose.
Which simply showed that Hicks was right, so argued Grandpa Dix,
"Because ef they had not hen killed craps would bin in a fix."
So while his seed was frozen stiff Grandpa was still elate,
Ol' Hicks had brought the insects out an' really saved the state.
—Nebraska State Journal.

Little Failings

Do you know people who are good as gold, who have odd little ways of their own, little habits that annoy and inconvenience their friends? Some have trying little habits that rasp others and put them in a fidget, much as they love those who are unconsciously guilty of the small exasperations. Some are absent minded and forgetful, others have trifling tricks of manner that make their friends exclaim inwardly, "Oh, I wish you would not!"

There are foibles as well as faults; there are weaknesses as well as wilfulness, and all these must be borne with. In some cases, they may be corrected, but oftener these small idiosyncrasies are fixed in the character, are flaws even in the fine gold. We must make the best of them; we must make the most of the gold, and not magnify the small defect that mars it.

When we are tempted to be impatient with these little failings, it is good to remember that others have to bear with ours. How do we wish them to do it? Let us mind the Golden Rule, then. If others were perfect, how would they get on with our imperfections? If others were perfect, would we feel at ease with them? If we had nothing to bear with, could we be truest friends?—Young People.

For the Birds

For a woman, with her gifts and graces, in this busy world, to turn her head-gear into a rookery for the display of stuffed birds, is to take a narrow view of her place and opportunity.

How can a woman flaunt a bird scalp on her head without a hardening process going on in her heart, unfitting her to that extent for the tender ministeries and gentle manners which make her the charm of social life.

We suggest that every woman inclined to put her head into such uses, sit down for ten minutes under the old maple and listen to the cheery orchestra of happy bird life, and then decide if any wish or act of hers shall go toward blotting out one such life. We give womanhood the credit of believing that her verdict in every such case would be for the life of the birds.

Those who protest against this sin of bird destruction are rapidly increasing, and the number of fair heads crowned with bird plumage is steadily lessening. Heaven speed the day when nowhere in all the land shall there be one heart so selfish as to allow any bird-song die out for the adorning of the feminine head.—Our Dumb Animals.

To be honest, to be kind, to earn a little and to spend less; to make upon the whole a family happier by his presence; to renounce where that shall be necessary, and not to be embittered; to keep a few friends, but these without capitulation; above all on the same grim conditions to keep friends with himself—here is a task for all that a man has of fortitude and delicacy.—Robert L. Stevenson.

Opportunity with ability makes responsibility.—Bishop Hurst.

Are Quick To See

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Stuart's Dyspepsia Tablets are a discovery of great value to the medical profession and the public. They are an unfailing specific in all cases of dyspepsia and disordered digestion.

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It's a common-sense medicine and a common-sense treatment, and it will cure every time. Not only cure the disease, but cure the cause. Goes about it in a perfectly sensible and scientific way.

We have testimonials enough to fill a book, but we don't publish many of them. However—

Mrs. E. M. Faith, of Byrd's Creek, Wis., says: "I have taken all the Tablets I got of you, and they have done their work well in my case, for I feel like a different person altogether. I don't doubt if I had not got them I should have been at rest by this time."

H. E. Willard, Onslow, Iowa, says: "Mr. White, of Canton, was telling me of your Dyspepsia Tablets curing him of dyspepsia, from which he had suffered for eight years. As I am a sufferer myself I wish you to send me a package by return mail."

Phil Brooks, Detroit, Mich., says: "Your dyspepsia cure has worked wonders in my case. I suffered for years from dyspepsia, but am now entirely cured and enjoy life as I never have before. I gladly recommend them."

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These are the great curses which afflict three-quarters of the present generation. Sufferers from either one or all of them must always feel miserable, and sooner or later become chronic invalids, useless to themselves and a burden and nuisance to friends and family. There is one sure, safe and absolute cure which you can test without any expense. Our remedy is **Egyptian Regulator Tea**, a trial package of which we will send you *free and prepaid* on request. Unless you find our claims are true, we must be the losers by this liberal act. Shall we send you the trial package, and lead you to perfect health and happiness? Address,

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New Forms of Social Entertainment

PATRIOTIC EXHIBITIONS AND TABLEAU SONGS FOR WASHINGTON'S BIRTHDAY

"A living flag" was recently made an attraction for an entertainment in Boston. It was a chorus in which the ladies were dressed in red or white and the men in blue, so as to represent the flag. In such a tableau song the men in blue might hold standards of stars, so as to represent the stars in the field of blue.

The "living flag" forms a spirited and noble chorus, especially under electric lights, for the singing of such songs as "The Star-spangled Banner," "The Sword of Bunker Hill," and for all the other songs of the Union. Let the old songs of '61, '62, '63 and '64 be sung as solos with the "living flag" for a chorus.

Another patriotic tableau with a reading may be made a surprise, and have a thrilling effect. It may be called "The Frozen Flag of the Delaware." General Washington stands on a boat, surrounded by rowers, "minute-men of Marblehead." The standard-bearer holds a frozen flag—a flag covered with crystals so as to reflect electric or other lights. The tableau is shown first several times by flashes of light upon it. The flag gleams. Then the following may be read before the curtain, after which full light is poured upon the tableau to the singing of "The Star-spangled Banner."

THE FROZEN FLAG OF THE DELAWARE

In abbeys green that ring and chime,
In turrets gray that blaze in air,
In ivied halls, in Rheinish rooms,
In Rome's old temples' odorous glooms,
Are song and mirth—'tis Christmas time—
'Tis Christmas on the Delaware.

"Forward!" No star is in the sky,
He sees the misty torches flare,
He hears the ice-floes grind the shores,
He hears the beat of muffled oars,
He hears the startled heron cry—
'Tis Christmas on the Delaware!

For him there ring no ivied towers,
No sauve lutes play, nor pages fair
Bring mistletoes from resinous woods,
And giant oaks in solitudes,
To lend their grace to festal hours—
'Tis Christmas on the Delaware!

"Forward!" 'Mid swirl of snow and sleet
He sees the serried torches flare,
The ice-mailed men with silent tread,
The minute-men of Marblehead,
Move past like ghosts, no war-drums beat—
'Tis Christmas on the Delaware!

"Forward!" It was the hand of God
That covered them with darkened air.
"Forward!" They marched within the cloud,
So Israel's seer the heavens bowed.
"Forward!" He spoke the prophet's word—
'Tis Christmas on the Delaware.

"Let there be darkness!" He had sought
With elements wild the war to share!
His weakness to the storm had rought;
He stopped the clock of time, and wrought
The miracle of faith untaught—
'Tis Christmas on the Delaware!

O men, ye may not know the way,
The storm is freezing in the air,
But forward, forward, dare the tide,
If not the way, ye know your Guide,
Though drums beat not nor bugles play—
'Tis Christmas on the Delaware!

The foe, his Christmas revel kept,
Lay down; his torches ceased to glare.
He heard the north wind tramp and blow,
He heard the swirl of sleet and snow,
And closely drew his cloak and slept—
'Tis midnight on the Delaware.

And Riall, his winning cards revealed,
'Mid languid pipes and sleepy air,
The night is waning—"All is well!"
'Tis false, O weary sentinel!
There came a flash, the dead earth reeled,
As though the clock of fate had pealed—
'Twas Christmas on the Delaware.

That flash the veil of centuries rent,
That thunder shook the continent;
With Washington the storm had marched,
And when the morning sunlight arched
The world with glory, Time had won
Her noblest field in Washington!
'Twas Christmas on the Delaware!

HEZEKIAH BUTTERWORTH.

Live Faithfully To-day

There could be no greater folly than for men and women to permit themselves to go tramping across the desert sands of wasted to-days, deceived by the illusion of to-morrow's mirage. Why promise yourself you will be a better man to-morrow than you are to-day? Unless to-day is being lived faithfully, there is no hope of your delivering the goods of an honest life to-morrow. Solid character to-day is the only material that you can be sure will not fail you to-morrow.—Louis Albert Banks.

I SELL FARMS

RESIDENCES, ETC., NO MATTER WHERE LOCATED

If I can get more cash for your farm (and get it more quickly) than any other real-estate broker, you surely want to know it.

It will cost you but a two-cent stamp to send me description and price of your farm and find out what I can do for you.

I am in a better position to find a quick buyer for your farm than any other man in America.

I employ more than fifty capable assistants.

I co-operate with thousands of bright, energetic real-estate brokers in all parts of the country.

I spend more money in advertising than any other real-estate broker.

This advertising brings from 2,500 to 3,000 inquiries monthly for farms and real estate of all kinds in all parts of the country.

Some of these inquirers may want your farm. (Better find out.)

I am reaching more prospective buyers than any other real-estate broker.

This fact alone proves that I can undoubtedly sell your farm for a better figure than any other broker.

Therefore, you cannot afford to sell your property without consulting me, and giving me a chance to sell it at the highest possible price. Some people imagine I charge high commissions because I advertise so extensively. They are mistaken. My commissions are no higher than are charged by most brokers.

Another important point: If you place your farm in my hands it will not be tied up in any way. You can withdraw it at any time. If you should happen to find a buyer before I do, you will owe me no commission.

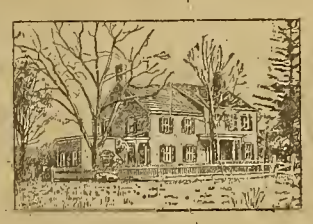
When sale is made I advise having your local bank handle the money, so that no one concerned takes any risk.

National Bank, Corporation, and individual references gladly furnished. I also refer to the publisher of this paper, and to more than 300 other publications carrying my advertising. If you want to sell your farm for the highest possible price, in the shortest possible time, write me. Inclose a stamp if you care to. **Do it Now.**

4,000 Acres, McIntosh Co., Ga. Small house and other buildings. Magnificent beach of 3 or 4 miles. Plenty of game, deer and sea-fishing. Oak grove of 10 or 20 acres. Splendid place for cattle-ranch or hunting and fishing club. $20,000.

576 Acres, Corn and Cotton Plantation on Tennessee River, Madison Co., Ala. Large, typical Southern house. Store and gin-mill, fully equipped. Land well timbered. Fine 10-acre fish-pond; would make exceptionally good stock-farm. $17,500.

Desirable Property in Delaware Co., Pa. Consists of 39 acres, good stone house, excellent barn and other buildings. Orchard. Creek runs through land. Would make good poultry, dairy or fruit farm. ½ mile to R. R., $3,000. This is a low price.



70 Acres in Middlesex Co., N. J. ¾ mile from Oak Tree station on Lehigh Valley R. R. Good, rich land, nearly all of which can be plowed. Large, substantial house; barn comparatively new. Good well and cistern. Price $5,000.

50 Acres near Sheffield, Mass. This is an excellent site for a country home or hotel. Situated on the main road through the Berkshires, between Ashley Falls and Sheffield. About 25 acres under plow. 300 fruit-trees. Two good wells. $1,800.

Desirable Summer Home, Long Lake, N. Y., and 16 acres. House, remodeled, of 6 rooms. Land well timbered. Has necessary buildings and ice-house. Good fishing. Steamer stops daily at dock with supplies. Fine view. $3,500.

160 Acres, Windham Co., Vt. Good house and barn. Excellent apple orchard. Also other fruits, such as plums, pears and smaller fruits. Fine maple-sugar orchard. Land well timbered. Two trout brooks on land. Magnificent view. 9 miles to R. R. $1,300.

SOME SAMPLES OF RECENT TESTIMONIALS

A Maryland Sale for an Ohio Client

In reply to your communication of recent date, I take pleasure in saying that you made the sale of my Maryland property as promptly as could be expected, and the deal was closed up in a thoroughly satisfactory manner.

GEO. W. BILLINGS, 37 Case Ave., Cleveland, Ohio.

A Florida Sale for a Connecticut Client

I was more than pleased to receive check for the price of my house and lot in DeSoto County, Florida, and I want to commend the skill and promptness with which you have handled the transaction.

MRS. EMILY L. PERKINS, Terryville, Conn.

A California Sale for a New York Client

By placing some California property I had for sale in your hands, I found you could sell real estate no matter where located.

CHAS. B. PARENT, Birchton, N. Y.

A New Jersey Sale for a Massachusetts Client

We have received the check in full payment for our New Jersey property. It is a remarkable fact that this property has been on the market and in the hands of various agents for more than twenty years, and your success in making a cash sale in a short time is proof to us that you are the only agent who ever made a real effort to dispose of it.

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RHEUMATISM

conquered in 60 minutes, and all pain and discomfort stopped in two hours by Dr. Whitehall's famous capsuleoids, conveying to all exactly the same cure for which the brilliant specialist has been paid fees of from $100 to $500 in his practice. On sale at all druggists; are authorized to refund price if you try a box without satisfaction. Price is made low so all may try it. Undoubtedly one of the world's greatest medical wonders, surpassing the belief of almost any one. For this reason it is difficult to advertise. Doctors and chemists have found some things in the past which would afford slight relief. But the advertising of such remedies as "cures" makes it now almost impossible to impress the afflicted with a serious realization of what this discovery means. It means true salvation from rheumatic suffering. If druggists in your neighborhood are out of it, send 50 cents direct to the Dr. Whitehall Co., Suite 11 Oliver Opera House Block, South Bend, Indiana. To all who send for it we say, if you prove to us you have used a box of the capsuleoids without marked immediate relief, and continue its use without a complete cure in a reasonable time, Dr. Whitehall will send you a check for $10.00.

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WE HAVE NO AGENTS but ship anywhere for examination guaranteeing safe delivery. You are out nothing if not satisfied. We make 195 styles of vehicles and 125 styles of harness. Our prices represent the cost of material and making, plus one profit. Our large free catalogue shows complete line. Send for it.

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Marvelous Elixir of Life Discovered by Famous Doctor-Scientist that Cures Every Known Ailment.

Wonderful Cures are Effected that Seem Like Miracles Performed—The Secret of Long Life of Olden Times Revived.

The Remedy Is Free to All Who Send Name and Address.

After years of patient study and delving into the dusty record of the past, as well as following modern experiments in the realms of medical science, Dr. James W. Kidd, 122 First National Bank Building, Fort Wayne, Ind., makes the startling announcement that he has surely discovered the elixir of life. That he is able with the aid of a mysterious compound, known only to

DR. JAMES WILLIAM KIDD

himself, produced as a result of the years he has spent in searching for this precious life-giving boon, to cure any and every disease that is known to the human body. There is no doubt of the doctor's earnestness in making this claim, and the remarkable cures that he is daily effecting seem to bear him out very strongly. His theory which he advances is one of reason and based on sound experience in a medical practice of many years. It costs nothing to try his remarkable "Elixir of Life," as he calls it, for he sends it free to any one who is a sufferer in sufficient quantities to convince of its ability to cure, so there is absolutely no risk to run. Some of the cures cited are very remarkable, and but for reliable witnesses would hardly be credited. The lame have thrown away crutches and walked about after two or three trials of the remedy. The sick, given up by home doctors, have been restored to their families and friends in perfect health. Rheumatism, neuralgia, stomach, heart, liver, kidney, blood and skin diseases and bladder troubles disappear as by magic. Headaches, backaches, nervousness, fevers, consumption, coughs, colds, asthma, catarrh, bronchitis and all affections of the throat, lungs or any vital organs are easily overcome in a space of time that is simply marvelous.

Partial paralysis, locomotor ataxia, dropsy, gout, scrofula and piles are quickly and permanently removed. It purifies the entire system, blood and tissues, restores normal nerve power, circulation, and a state of perfect health is produced at once. To the doctor all systems are alike and equally affected by this great "Elixir of Life." Send for the remedy to-day. It is free to every sufferer. State what you want to be cured of and the sure remedy for it will be sent you free by return mail.

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I have spent nearly 50 years in the treatment of the above named troubles and believe I have effected more permanent cures than any specialist in the history of medicine. As I must soon retire from active life, I will, from this time on, send the means of treatment and cure as used in my practice, **Free** and post-paid to every reader of this paper who suffers from these loathsome, dangerous and disgusting diseases. My treatment will positively give prompt relief and cure in the worst cases. This is a sincere offer which anyone is free to accept. Address, PROFESSOR **J. A. Lawrence, 114 West 32d St., New York.**

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WRITE THE LADY DOCTORS STATE YOUR TROUBLE AND BE CURED AT HOME. OUR REMEDY GIVES RELIEF IN 24 HOURS. Address WOMAN'S MEDICAL INSTITUTE, Dept. 59, Detroit, Mich.

$50 a month earned distributing samples. Enclose stamp. INTER'L DIS. BUREAU, 150 Nassau St., N. Y.

The Stage Villain

Under the painted canvas tree
The wicked villian stands,
With blue-black whiskers on his face
In coarse and shining strands,
And gleaming daggers tensely held
In both his sinewy hands.

His record's bad, and black, and long,
He's "wanted" everywhere.
Detectives crack are on his track,
Yet never find his lair,
Until, just as the curtain falls,
They land on him for fair.

Act in, act out, he maims and slays,
And lies, and robs, and steals;
He sneaks along with dagger drawn
Behind the hero's heels,
And yet no crime, however foul,
His purpose dark reveals.

The children coming home from school
(A millionaire's, of course),
He gags and binds and carries off
Upon a charging horse,
And, though they howl, and plead, and wail,
He never shows remorse.

In fact, he says but little, save
When some deep plan is spoiled,
When some bold hero lands the girl
For whom the villain toiled.
He growls between his close-clenched teeth
In awful accents, "F-f-f-f-foiled!"

He goes on Sunday to the church,
And prays both loud and long,
And lifts his large and deep bass voice
In spiritual song,
For playing the church-member dodge
Is where he most is strong.

Killing, destroying, embezzling,
Through every act he goes,
Each moment sees some new-formed plan
To add to human woes.
Something attempted, something done,
Has foiled his many foes.

Thanks, thanks to thee, my worthy friend,
No longer will we lack
The means to trace a villain down
And catch him in his track.
We'll straight pursue all deep-voiced men
Whose whiskers are blue-black!

—J. J. Montague, in The Portland Oregonian.

Willing to Adapt Himself

A very small pile of coal lay on the sidewalk in front of a house on A street southeast. A correspondingly small son of Ham was sauntering along, and seeing it, scented a job. He rang the door bell.

"Am dat you all's coal?" he asked the lady who appeared at the door.

"Yes."

"Want it toted in?"

"Yes."

"Kain't I git de job?"

"Why, you're pretty small, and then you might charge too much. You might ask more than I could pay."

"How much is yo' got?" asked the small man of business. "Kin yo' raise a dollah?"

"Oh, my goodness, no."

"Seventy-five cents?"

"No; run along, and don't bother me," and she started to close the door.

"Mebbe so yo'll gib fifty cents."

"No, no; run along."

"I reckons yo' all ain't got er qua'tah?"

"No."

"Ner a dime?"

"No, not even a dime," replied the woman, beginning to laugh.

"Well, how much is you got?" questioned Ham, showing his ivories. "I sut'nly does wanter git de job."

"I've got just a nickel."

"Well, I'm jus' a-lookin' fer nickel jobs," and he straightway began.—Washington Star.

Spoke as They Met

George L. Fox, rector of a preparatory school in New Haven, who was here at the Teachers' Convention, illustrated a point he wished to make with a Boston story that may be interesting. The scene is well off Minot's Light, at break of day, on a foggy morning. As the fog begins to lift two vessels discover themselves within hailing distance, one a sloop, the other a big square rigger. The captain of the small boat hails:

"A-ho-o-y, a-ho-o-y! What ship is that?"

"Reindeer, Captain Jones, Calcutta to Boston."

"How long ye been out?"

"One hundred and fourteen days."

Then the big fellow hailed:

"A-ho-o-y, a-ho-o-y! on board sloop! What ship is that?"

"Buster, Captain Smith, Gloucester to Boston."

"How long ye been out?"

"A'l night."—Boston Herald.

They Spoke as They Passed By

The motorman clanged his gong.

But the driver of the coal wagon paid no attention to him.

The motorman clanged again.

The conductor sounded a 4:11 alarm and yelled.

But the driver of the coal wagon paid no attention to him.

Again the motorman clanged his gong.

"Get out of the way, there, you blank-dash idiot!" he said.

But the driver of the coal wagon paid no attention to him.

Driving placidly along in the track at the rate of two miles an hour, smoking his pipe, he sat with humped shoulders, lost in thought.

A few blocks ahead was the crossing of another street-car track.

On reaching this crossing he turned slowly and deliberately to the right.

The motorman, wild with wrath, shouted at him as the car sped by:

"—— —— ——! —— —— ——! —— —— ——!"

Then the coal teamster slowly and deliberately took his pipe from his mouth and replied substantially as follows:

"—— —— ——! —— —— ——! —— —— ——!"

Then he replaced the pipe in his mouth and drove on, lost in thought.—Chicago Tribune.

A Veritable Booby

"Oh, he is the stupidest thing! Of course, I didn't mean it as an invitation or anything of the kind, but—Oh, well, I hate him! He was so awfully slow that after the clock had struck several different hours since his arrival I said, 'Let me see! What is the rest of that old saying about a kiss without a mustache?'

"He perked right up and answered that it was like hanging an anarchist in effigy, and then told a foolish story about an old woman who thought Effigy was a town away out in Oklahoma where they were always hanging people. Pshaw! He is so slow he can't even catch cold!"—Puck.

Plantation Philosophy

Hit is er long head dat knows no turnin'.

Er lost oppertunity nebbah finds hits way back.

Hones' men ain't naturally polerticians.

Take care ob your votes an' polertics will take care ob demselves.

Hit is much easier toe lub some people dan hit is toe agree with dem.

Practical polertics lacks er good deal ob bein' statesmanship.

One drop oh corruption will spile a bucketful oh polertics.

Liberty is sweet, but hit ain't sweetened wid sugar.—Arkansaw Thos. Cat.

The Rise of a Runner

"Well, suh," said the colored constituent, "dey's no tellin' whar Marse Tom'll land ef he keep on gwine! Fust he wuz town marshal, den he wuz mayor, en las' week dey sent him to the legislatur'! Ef he keeps up that hallelulia lick I wouldn't he 'tall surprise ter hear dat he wuz boss er one er dem streetcars what run by elumtricity!"—Atlanta Constitution.

Noblesse Oblige

"What are you staring at, Nellie?"

"Oh, please, ma'am, with your hair like that, and your diamonds, you do look so like Lady Plantaganet Gingham that I was own maid to! Are you any relation, ma'am?"

"No—at least, no near relation. But you can have that pink silk shirt-waist of mine, Nellie."—Life.

None Required

He was obviously anxious, and she seemed almost willing.

"I shall refer you to Papa," said she, with a becoming blush, "before giving you a final answer."

"But I am perfectly willing to take you without any reference," said he, magnanimously.—Indianapolis News.

Sarcastic

Wife (reading)—"Another mysterious suicide—unknown man throws himself from a cliff."

Husband (thoughtlessly)—"Bet his wife was at the bottom of it."

Wife—"Charles!"

Husband (hurriedly)—"Of the cliff, my love; not the suicide."—Collier's Weekly.

The Inevitable

Wife—"I had to spend fifty of that five hundred for some necessary things."

Husband—"Well, what are you going to do with the four hundred and fifty?"

Wife—"Oh, that goes for luxuries."—Judge.

ELECTRIC BELTS FREE TO SUFFERING HUMANITY

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WE SHALL GIVE AWAY FREE OF ANY COST for advertising purposes, Dr. Horne's New Improved, Best and Most Powerful $20 Electric Belt with suspensory attachment. We are making this offer TO MEN ONLY, to further introduce our Appliances in new localities. This is not a C. O. D. free trial, deposit or medicine scheme, but a bonafide generous offer to suffering humanity. Don't be deceived by flaring advertisements of medicine houses or so-called Institutes advertising Electric Belts free, whose only scheme is to force upon you a lot of drugs which they send C. O. D. at a high price. We are the only Electric Belt Company in the U. S. that give away Electric Belts free and have been doing so for years. We shall give away another large number this year. We mean just what we say—

FREE OF ANY COST.

If you are a sufferer, write at once as offer is limited; state nature of disease and give waist measure. All correspondence strictly confidential.

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Do you want a watch that runs and keeps good time? Our watch has a **Gold** laid case, handsome dial, dust proof, adjusted to position, patent escapement, and highly finished. This is a remarkable watch. We guarantee it, and with proper care it should wear and give satisfaction for 20 years. It has the appearance of a **Solid Gold** one. The movement is an **American Style**, expansion balance, quick train, and you can rely upon it that when you own one of these truly handsome watches you will always have the correct time in your possession. Just the watch for railroad men, or those who need a very close timer. Do you want a watch of this character? If so, now is your opportunity to secure one. **We give a beautiful Watch** as a premium to anyone for selling 18 pieces of our handsome jewelry for 10c. each. Simply send your name and address and we will send you the 18 pieces of jewelry postpaid. When sold, send us the $1.80, and we will send you the handsome **Gold** laid watch. We trust you and will take back all you cannot sell. We propose to give away these watches simply to advertise our business. No catch-words in this advertisement. We mean just what we say. You require no capital while working for us. Satisfaction Guaranteed. Address, **SAFE DEPOSIT WATCH CO. New York City**

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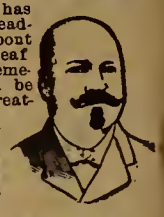

Dr. W. O. Coffee, Des Moines, Iowa, has just published a book on "Deafness, Head-Noises, Causes and Cure." It tells all about the ears and how he cured himself of Deafness with his wonderful Absorption Remedies. Ninety per cent of deafness can be helped or cured by the Absorption treatment. Incurable cases not taken.

He sends his book free to all having deafness and ear trouble who write him. The book explains how you can cure your deafness and head-noises at home at small expense. Ask for Deafness Book and write today. Address

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FITS I wish every person in the U. S. suffering with Fits, Epilepsy or Falling Sickness to send for one of my large-sized 16-ounce bottles **FREE.** *DR. F. E. GRANT, Dept. 136, Kansas City, Mo.*

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AKURE CURES ACHES Rheumatic Pains, Neuralgia, Lumbago, Croup, Sprains, Bruises, Sore Feet, Tooth-ache and Ear-ache. By mail 25c. AKURE CO., 511 Union Trust Building, BALTIMORE, MD. Agents wanted on liberal terms.

1427 Silk Fringe Cards, Love, Transparent, Escort & Acquaintance Cards, New Puzzles, New Games, Premium Articles, &c. Finest Sample Book of Visiting & Hidden Name Cards, Biggest Catalogue. Send 2c. stamp for all. OHIO CARD CO., CADIZ, OHIO. **CARDS**

916 CARDS NEW Sample Styles ENVELOPE, Silk Fringe 20 New Songs, 100 Rich and Racy Jokes, 1 pack Fun Cards, 1 Resort, and 1 Acquaintance Cards, Standard Bean Catcher, &c. All for 2 Cents. CROWN CARD CO., B20, Columbus, Ohio.

CARDS Send 2c. stamp for New SAMPLE BOOK of all the FINEST Styles in Gold Beveled Edge, Hidden Name, Silk Fringe, Envelope and Calling Cards for 1902. We sell GENUINE CARDS, Not Trash. UNION CARD CO., Columbus, Ohio.

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THE MODERN STOVE POLISH

Brilliant. Clean.
Easily Applied.
Absolutely
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LIQUID—
BETTER YET!
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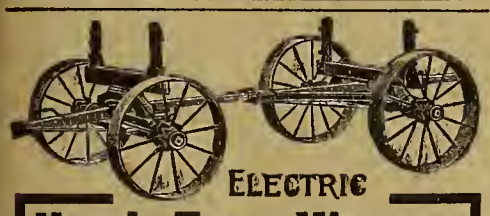

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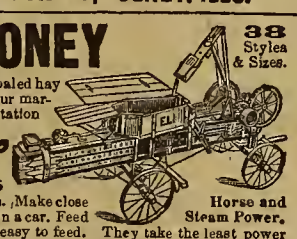

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The worst possible spavin can be cured in 45 minutes. Ringbones, Curbs and Splints just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

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WATCH FREE FOR selling 20 Packages Flower Seeds at 10 cents. We trust you.
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FARM SELECTIONS

Need for Full Utilization of Western Streams

THE future of large tracts of arid lands in the west, amounting to many millions of acres, depends largely on the use made of the streams flowing through them. Whether they shall remain in their present unproductive and uninhabited condition, or become the homes of thriving populations and centers of business activity is almost wholly a question of the fullest and most economical use of their available water-supply. Irrigation has been practised for years on portions of these lands and proved its value beyond question, but the development of more land demands the use of more water, and especially the use of the considerable amount of water which the older methods of irrigation could not control, and which are allowed to run to waste. This waste water represents a large and important acreage for reclamation from an arid state, if only the means are found to make use of it. Part of it is to be found in the spring freshets, part in the water that has sunk beneath the stream's gravel-bed, and part, already used for irrigation, which has worked its way so far below the surface as to be beyond the reach of vegetation.

Engineers are alive to the necessity of saving the waste and using over and over again as much of the streams' flow as possible, so as to extend the reclamation line to its utmost limit. Hence the storage of water on the upper portions of the streams, storage by the cultivation of forests about their headwaters, storage by snowfall, and storage by dams and reservoirs are being studied. Attention is also being directed to electricity as a help in economizing the use of water. The electric current is generated in the mountainous portions of the watersheds. It is then conducted to the lowlands and made to pump up again the water once used for irrigation which has sunk too low to moisten the crops, or wells are dug in the river gravels and the water usually to be found there pumped up for use on the farms.

Not only are the streams to be more fully used, but the underground waters are to be reached, and both artesian and ordinary wells made to furnish their very considerable flow of water.

The one idea in the arid West seems to be to use to the utmost all the water to be had in the most economical way, so as to put the largest possible acreage under cultivation.—Press Bulletin No. 25, United States Geological Survey.

Exercise for Sheep in Winter

The sheep should, like most other animals, have a certain amount of exercise in the winter as well as in summer. Close sheds and small yards are among the chief causes of all diseases of sheep, excepting, possibly, those that are due to stomach-worms and the grub in the head. Fevers, constipation, shedding of wool, difficulty in lambing and lambs of weak constitution are more often a result of a lack of exercise than of a lack of food or any other cause. Even the evils of overcrowding by having too many in one flock are less when they can have a run in the fields every day that they can go out without getting the fleece wet. When we kept them we took out their fodder and roots in the daytime and scattered it on the snow, rods away from the sheep-shed, that they might travel to find it. It might have been some trouble, but there was not much waste of food, and they always seemed better for the travel. This has seemed to be one of the possible difficulties in the way of growing fall or early winter lambs in the Northern states that could be only overcome by having the ewes in small flocks and ample shed-room in which they could exercise. Farther south, where the fields are seldom covered with snow, we should expect better success with winter lambs, and we look for those sections to make a strong competition with the Northern sections that now produce them as Southern truck-farms have made with Northern greenhouses and hotbeds or early vegetables.—The American Cultivator.

Everything for the Garden

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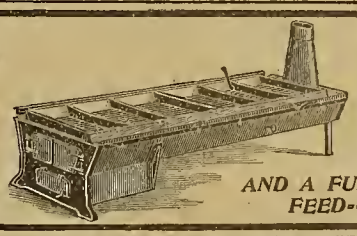

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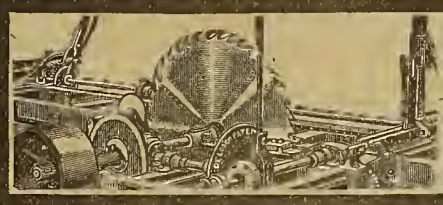

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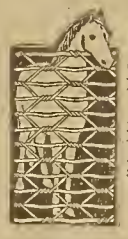

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FARM SELECTIONS

At the Turn of the Tide

"WOOL MARKETS AND SHEEP" has never been in the habit of trying to foretell what may happen to the markets, unless very sure of its ground. It has been our constant effort to keep in close touch with the progress of events.

Long ago we said in our market reports that we could see but little hope of improvement in the price of wool as long as the use of shoddy was not controlled by legislation that would protect the wool-grower. At the same time we pointed out that sheepmen have always been given to becoming panic-stricken, and cautioned them not to take fright, as we firmly believed that wool-growing and sheep-breeding were two industries that would never need to be prosecuted at a loss, even if profits should go down almost to the vanishing point.

This season sheepmen have been facing two profit-destroying conditions. The price of wool is low and the price of feed is high. Under the circumstances a good many sheepmen have become somewhat discouraged and have been sacrificing their sheep by selling them at a low price. That this has promoted a panicky feeling cannot be doubted, but there is no reason for any alarm. Let us stop for a moment and consider the conditions that confront us.

The lack of feed has caused hundreds of thousands of hogs to be sent to market, that with plenty of feed in sight would still be on the farms of this country. Not only market stock but breeding sows and unfinished pigs have been sent forward, until the country is short of hogs, not only of the market sizes and quality, but in the way of breeding stock also. It will take two years to bring back the stock of hogs to its normal proportions.

In cattle the same conditions prevail. Thousands of car-loads of cattle are being rushed to market and sold. Not only bullocks that are fitted for sale, but cow stock and heifers are coming in and hundreds of cattlemen are selling their stock far below their usual limit. The price of beef is advancing on account of the scarcity of stock and it will advance still more, for it will be several years before the herds of this country will be replenished.

In the meantime, people must have meat. As a nation we are not great mutton-eaters, because we, as a people, do not know how good mutton is. The high prices that prevail for pork and beef will drive any people to mutton for a meat food, in part, at least, and once they get a taste for it they will never cease to call for mutton in ever-increasing quantities.

There is every reason to believe that the mutton market is as low as it ever will be. It is no doubt lower now than it will be within three months, for we believe, taking a careful account of all the circumstances, that we are nearing the turn of the tide very rapidly. We shall have laws regulating the use of shoddy and we shall have an increased demand for mutton at better prices than now prevail. We believe the man who makes any sacrifice in order to sell his sheep just at this time will regret such action before the next shearing-time comes around.

Even at present prices sheep are not losing their owners any money, and as soon as the up-turn comes the profits will grow larger and larger. The outlook seems brighter now than it has at this time in the year for several years. —Wool Markets and Sheep.

Western dealers are predicting a drop in grain and feed prices. We hope they are right, for the figures have been altogether too high. The arguments advanced in favor of this opinion are good. Farmers have been feeding more hay and fodder—saving their grain. They have used materials which in former years were permitted to waste. That is about what happens when any article goes too high in price. Substitutes are found and forced to do service.—Rural New-Yorker.

Peaches and Nectarines on the Same Shoot

When this phenomenon was first observed, it was thought to be so incredible that the testimony of a single witness to its occurrence could not be accepted, but the evidence of numerous witnesses was required. In the Kew Herbarium is a drawing of such a case, and attached to it is a document (or a copy of the original document, we forget which), signed by a number of the leading botanists of the time, and bearing witness to the truth of the alleged occurrence. This was, if we remember rightly, in the latter part of the eighteenth century. Since that time many similar instances have been recorded, and some have figured in our columns. Another example has lately been sent us from Ragley Gardens, Alcester, from which establishment Mr. A. D. Christie sends us a branch with three nectarines and one peach. The tree was bought as a maiden peach four years ago. Whether it produced peaches before we do not know. All we can say is, that the peach was a peach and nothing but a peach; and that the three nectarines were equally distinct in their way, flavor included. We mention this because is has happened to us to see a fruit half nectarine, half peach. Mr. Christie asks us how this happens, and whether the nectarine is a sport from the peach. As the peach was known first, we presume there is no doubt the nectarine is a "sport," and the "sportiveness" is not confined to the bud, but the seeds of peaches sometimes also give origin to nectarines; but then come the questions, how? why? Very often these sports are the result of the dissociation of previously blended characters. It is possible that cross-fertilization occurred between a peach and a nectarine some generations ago, that the resulting offspring did not at first show any trace of the cross, but that now from some reason which we cannot fathom, there has been a sudden reversion, and the heretofore mixed elements become separated. We do not think the Mendelian "law" affects the probability of our suggestion, but in any case this explanation will not suffice to account for the first production of the nectarine.

Nectarines are generally reproduced from seed just as peaches are, hence it is not wonderful that some botanists have considered the peach and the nectarine to be of different species. The occurrence of the two on the same shoot, however, forbids us to accept this opinion, though we may fairly look on the nectarine as a species in process of formation. The reader will find in the first volume of Darwin's "Variation of Animals and Plants" a long discussion on the origin of the nectarine, the variation of peaches, from seed and otherwise, largely based on the communications of Mr. Rivers and others to our columns.—Gardeners' Chronicle.

Feeding Value of Wheat

The results obtained when wheat was fed at the various experiment stations show that as a food for growing pigs it is somewhat preferable to corn; but that for fattening pigs there is but little difference between wheat and corn. The best results, however, are obtained when wheat is ground and fed with other grains. A mixture of equal parts of ground wheat and corn gives better results than either wheat or corn when fed alone. Experiments show that ground wheat is ten per cent more digestible than whole wheat. When the price of wheat is low and it can be purchased for the same price per pound or less than corn, it will pay to use wheat in a ration. The manure from wheat-fed animals is more valuable than that from corn-fed animals. As a food for dairy animals, ground wheat has been found to be fully equal to either corn or a mixture of corn and barley, and when fed to fattening steers, ground wheat produced about the same results in a ration as ground corn. From the experiments that have been conducted, it would appear that the value of wheat, as a food, depends, to a great extent upon the way in which it is fed, and the foods with which it is combined. It is also equal to corn in a dairy ration.—Bulletin 14, Minnesota Experiment Station.

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Of Which Any Suffering Reader Can Have

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It is now possible to be quickly cured of any form of rheumatism without having your stomach turned upside down or being half-choked to death and made to vomit, and every sufferer from rheumatism should welcome this new and marvelous discovery with open arms, and give it an honest trial. John A. Smith, Milwaukee, Wis., while apparently hopelessly sick with rheumatism hit upon a combination of drugs, and is generous enough to send a 50-cent box free to every sufferer who writes at once. It is a home treatment, and will not keep you from your work.

As you know, if you've tried them, every so called rheumatic remedy on the market to-day, except this genuine cure, will cause you violent stomach pains and vomiting, and some of them are so dangerous they will cause heart trouble. And the worst of it is they never cure. When a person has rheumatism the constitution is so run down that he should be very careful what he puts into his stomach.

It therefore gives me pleasure to present a remedy that will cure every form and variety of rheumatism without one single unpleasant feeling. That remedy is

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Before I decided to tell the world about the discovery of "Gloria Tonic" I had it tried on hospital and sanitarium patients with perfect success. But some people never will believe anything until they know it from experience, so the best and quickest way is for you to write me that you want to be cured, and I will send you a trial box of "Gloria Tonic" free of cost. No matter what your form of rheumatism is—acute, chronic, muscular, inflammatory, deformant, sciatic, neuralgic, gout, lumbago, etc., "Gloria Tonic" will surely cure you. Do not mind if other remedies have failed you, nor mind if doctors say you are incurable. Mind no one, but write me to-day, sure. "Gloria Tonic" will stop those aches and pains, those inflammations and deformities, and cure you, so that life will again be worth living. This offer is not for curiosity seekers, but is made to rheumatics only. To them I will send "Gloria Tonic" free.

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The Geranium is among the most popular of all plants both for potting or bedding. More than this, they are exceedingly easy to grow and are free from insects. Collection here offered includes the latest and best varieties of this popular flower. They are unusually fine year-old plants, and with proper care are sure to grow. **Order Geranium Collection as No. 290.**

FOUR DIFFERENT COLORS, AS FOLLOWS:

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SIX DIFFERENT COLORS, AS FOLLOWS:

One yellow, one deep crimson, one rich scarlet, one white, one light pink striped with a darker shade, one bright clear pink.

6 Japanese CHRYSANTHEMUM-Plants

The collection here offered is made up of large, double-flowering Japanese Chrysanthemums, the direct offshoots of prize-winning varieties. This collection embraces all colors known to the Chrysanthemum family, and all shapes and forms, as incurved, recurved, twisted, whorled, ostrich-plumes, etc., also early and late bloomers. They are well-rooted plants and sure to grow. **Order Chrysanthemum Collection as No. 558.**

SIX DIFFERENT COLORS, AS FOLLOWS:

One deep golden yellow, one rose-pink with soft-satin finish, one fiery red, one velvet-rose with silky texture, one pure ivory-white, and one creamy white showing a tinge of pink.

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FARM SELECTIONS

Tankage as a Food for Pigs

Tankage is a product of fertilizer factories, consisting of certain waste products from slaughter-houses. It is quite variable in quality, as it may consist of refuse meat, parts of intestines, including contents, hair, etc. Two classes are made, one known as concentrated and the other as crushed. The former does not enter into consideration as a feeding material. Crushed tankage is of several grades. Manufacturers usually grade it as No. 1 and No. 2, although it is really sold on the basis of its composition of ammonia and phosphoric acid for fertilizer purposes. Probably No. 1 is free from the contents of intestines, and grades higher in composition than the No. 2.

As a feeding material for pigs, tankage offers certain advantages. It contains a high per cent of protein, and an amount of phosphoric acid that materially excels that found in any grain or by-product of mills. The phosphoric acid for pigs is useful in building up bone-structure, an important feature with our pigs of to-day, while the protein has a value recognized by feeders.

So far as the writers are aware, no reports have thus far been published by experiment stations showing the use of tankage as a food for swine. However, at the annual meeting of the Central Poland China Swine Association at Indianapolis in January, this year, two breeders reported upon the use of this substance as a food with their pigs. Mr. W. A. Hart, of Jay County, was quite emphatic in the beneficial results he had secured from its use, and the other person in question reported favorably. Later in the year Mr. Hart had an article in the Breeders' Gazette, (February 6, 1901), from which we quote the following:

"Especially with young pigs one finds some feed of great advantage that is rich in all the nutrients required, that is easily digested and especially palatable. . . . A year's experience with feeding tankage shows it the ideal feed for this purpose. Blood, lungs, etc., are cooked together in large tanks at the large packing-houses. The fat is drawn off and the residue dried and ground for hog feed. It costs about twenty-three dollars a ton laid down at my home, contains about double the protein found in oil-meal, and is a very much better feed for pigs. It seems to be a perfect substitute for milk, a pound of the tankage costing less than a cent and a quarter, having a feeding value equivalent to about three gallons of skimmed milk for pigs. A mixture of thirty pounds of corn to ten pounds each of wheat midlings and tankage makes a very well balanced ration for pigs up to four months of age. A very good ration for older pigs or hogs may be made by reducing the middlings and tankage fully half in proportion to amount of corn. Tankage dissolves almost instantly when put in water. It should be fed in slop. Pigs fed upon tankage show great muscular and bone development, have ravenous appetites and are free from gouty and rheumatic troubles."—From Bulletin No. 90, of the Indiana Experiment Station.

Catalogues Received

Cole's Seed Store, Pella, Iowa. Cole's illustrated annual of garden and flower seeds.

The M. Crawford Co., Cuyahoga Falls, Ohio. Catalogue of new strawberries and the best old ones.

D. Landreth & Sons, Philadelphia, Pa. Illustrated catalogue of choice vegetable, field and flower seeds.

Geo. Ertel Co., Quincy, Ill. Descriptive illustrated catalogue of the Improved Victor incubators and brooders, full of practical information for the progressive poultryman.

The Whitman & Barnes Mfg. Co., Chicago, Ill. Descriptive circular of the Hopkins' spring cutter-cap for holding the knife section in close contact with the guard-plate.

Peter Henderson & Co., New York. "Everything for the Garden, Farm, Lawn and Greenhouse." Handsomely illustrated with half-tone and color-plates. Price, 20 cents.

The Johnston Harvester Co., Batavia, N. Y. Illustrated catalogue, describing binders, headers, reapers, mowers, rakes, corn-binders, disk-harrows, disk-cultivators, spring-tooth harrows and seeding attachments.

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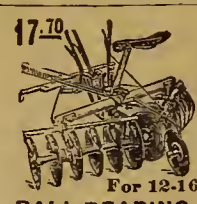

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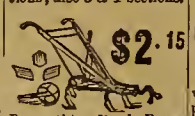

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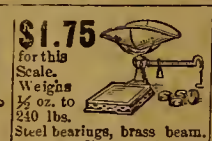

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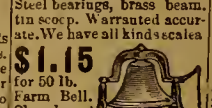

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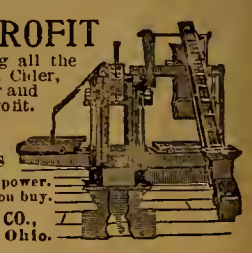

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Cuban Agriculture—Sugar and Tobacco

BY FREDERIC J. HASKIN

CUBA is in every sense of the word an agricultural country. Its soil is very rich and yields the principal amount of the island's wealth. With the exception of the sugar-mills and cigar factories, there are practically no manufactories at all. Its staple crop is sugar-cane, nearly fifty per cent of the cultivated area being devoted to this product. It has been called "the sugar-bowl of the world." As a close second in importance to sugar-cane must be named tobacco, which yields an annual return of millions of dollars to the planters of the island. The quality of Cuban tobacco is world-renowned. All attempts to reproduce its texture and flavor in other localities have failed. In times past Cuba produced more coffee than the island of Java, but owing to the ravages of war and the growth of the industry in other countries the cultivation of this product has materially decreased.

Considering the constant and bloody wars that have been waged on Cuba's soil, it is strange that even a vestige of prosperity is left to her. Time and again the face of the fair island has been scarred by the sword and the torch. Her fields have been literally drenched with the blood of her people and the skies darkened with the smoke of her ruined industries. But for the fact that the overthrow of governments does not destroy the soil, the future of Cuba would indeed be hopeless. In the fertility of her lands lies the secret of her having withstood the terrors of centuries of revolution.

Before entering into a discussion of the products of the island and the conditions governing their culture, it may be well to refer to its dimensions, topography and population. It is seven hundred and fifty-nine miles long from Cape Maysi on the east to Cape Antonio on the west, with a breadth varying from thirty-seven to ninety miles. It has an area of about forty-five thousand square miles. Its highest mountains are about eighty-four hundred feet above the level of the sea. Mineral-waters are very plentiful throughout the island and the greatest rainfall occurs during the months of May, June and July. The fertility of the soil is accounted for by the presence of quantities of limestone close to the surface of the earth. The territory of the island is divided into six provinces located in the order given, from east to west, as follows: Santiago, Puerto Principe, Santa Clara, Matanzas, Habana and Pinar del Rio. The territory in these six provinces embraces eight million seven hundred and sixty-one thousand nine hundred acres. Of this number only nine hundred and one thousand one hundred acres are under cultivation and it is this portion that is supporting the present population, which numbers a little more than a million and a half. The district of Habana is the most thickly settled, being about as densely populated as the State of Connecticut, while the most sparsely settled province is Puerto Principe, which will compare with Texas, having only six rural inhabitants to the square mile. The statistics show that there are sixty thousand seven hundred and eleven farms in Cuba, the average size of which is one hundred and forty-three acres. The whites occupy over seventy per cent of these farms.

A CUBAN COUNTRY HOME

Inasmuch as the production of sugar-cane has been the greatest source of wealth in Cuba in the past and offers the greatest possibilities for the future, a brief contemplation of the industry as practised in the island will be of interest. There are two seasons for cane-planting, known as the winter and spring seasons. The first is during the months of September, October, November and December, and the second during April, May, June and July. What is known as middle planting is done whenever there is enough rainfall to create sufficient moisture in the ground. A field that has never been cultivated at all must be burned over after being cleared. Ground that has been under cultivation is thoroughly plowed before being planted. After a field has once been planted, the only preparation necessary for each new crop is to thoroughly clear the land of weeds. To clear and break a thirty-three-acre tract of cane, plant and cultivate it and bring the crop to maturity, will cost the farmer about fifteen hundred dollars. On this investment he will have to wait three or four years for a return, but after this period he will get a good crop each season. If the harvesters are careful not to injure the roots, the yield will continue from five to twenty-five years. There are instances where fields have steadily produced without replanting for nearly fifty years. Unless the land does reproduce well it cannot be cultivated profitably. Soil that has to be planted every three or four years will cause the financial ruin of the planter.

During the early period of the industry in the island, a plantation of fifteen hundred acres, which would produce three hundred and fifty tons of sugar each year was considered very large, but there are now plantations embracing twenty-five thousand acres. In order to equip and maintain such a large piece an immense investment is

[CONCLUDED ON PAGE 5]

HARVESTING SUGAR-CANE IN CUBA

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WITH THE VANGUARD

GENERAL LEONARD WOOD, Military Governor of Cuba, recently contributed to the columns of "The Independent" an interesting article on the need of reciprocity with Cuba. In part he says:

"We have only partially completed our obligations toward Cuba. We must now give her an opportunity to build up such trade relations as will render a stable government possible.

"Her two principal products are tobacco and sugar. She purchases from abroad everything her people wear, much of what they eat and use in their households. She actually imports a large portion of her building material. There is little, except among those articles classed as luxuries, which she purchases that we do not produce. She is only ninety miles removed from our coast, and such has been the destruction wrought by wars and a bad government that for generations to come Cuba will continue to be a purchaser to the full extent of her ability to buy. There are town and palatial country residences almost entirely destroyed which are to be rebuilt and restored to their former beauty; there are railroads which must be built and others which must be reconstructed, and huge amounts of structural iron and machinery of all kinds to be imported. From our situation and by reason of the sincere and earnest friendship her people have for us we should control practically all of this trade of Cuba. The island to-day has a population of only one and one half millions. It can carry easily twelve millions. This large population of the future should be, and will be—if proper means be now employed—composed of industrious and enterprising planters and developers, a large proportion of whom will probably come from our own country. With time a strong, prosperous people will be built up in the island. It will be a people who will not be a menace to us, who will not be a tax upon us; it will be one whose trade and whose good-will should be of the greatest value.

"Cuba's geographical position is such that she practically controls the entrance to the Gulf and the approaches to the proposed isthmian canal, and she stands in the line of trade between North and South America. It is most important that her government shall be stable; that her population, financially and politically, shall be sound and self-sustaining, and that the disposition and the spirit of her people continue friendly to us as a nation. The wise provisions of the 'Platt Amendment' have done much to guarantee a stable government, and I believe that what is needed to bring about the desirable conditions referred to is to make it possible for Cuba's two great industries to live and return a reasonable profit to their promoters. The United States will gain as much by developing its trade with Cuba as Cuba will gain by the increase of its trade through more favorable relations with the United States. We can send her everything she requires to maintain, clothe and feed her people. We can admit her products with a reasonable reduction on the present duty without injuring the interests of our people who are now at work on similar lines. And in doing it we shall greatly benefit our people as a whole, and we shall have carried out our promises in good faith."

REGARDING the business outlook "Clew's Financial Review" says: "Among a large number of shrewd, successful men there is a feeling that the time is ripe for conservatism, that the wave of prosperity has reached its crest and can make little further progress unless some degree of recession takes place to permit another start. On the other hand, there is still a large recognition of the fact that while the country has been making phenomenal progress, breaking all former standards, the business situation is still sound, and that as yet there is no appearance of overstrained credit or serious reaction.

"One amazing feature is the slight effect the loss of the corn crop is having upon either railroad traffic or general business. The receipts of grain at Chicago during four weeks in January were only eleven million bushels against over twenty-two million bushels the same week last year, a loss of fifty per cent in this class of traffic, due chiefly to reduction in the corn movement. It was expected that January would be the period when this deficiency began to be felt, but the most enthusiastic optimist scarcely had the courage to predict that it would make no difference to the grand result in earnings. Such a loss in traffic a few years ago would have put some roads into bankruptcy, while now the roads affected are actually showing gains over the large returns of a year ago. This simply goes to prove the great activity in general business. The farmers of the West have enjoyed a series of prosperous years; high prices for corn and oats together with a good yield of wheat have largely compensated them for the shortage in corn. The towns and cities of the West are also still in the midst of the boom, and the resulting immense demands for both raw materials and manufactured products keep the railroads taxed to their full capacity. Experienced judges on the ground are of opinion that the prosperity wave has not yet spent its full force in the West, though it may have nearly done so in the East."

THE Hon. Aaron Jones, Master of the National Grange, in an address before the Committee on Ways and Means, on the question of lowering the tariff on Cuban sugar, said:

"Mr. Chairman and gentlemen: I am Master of the National Grange, an organization which has its branches throughout the United States, and contains a membership of about five hundred thousand in the various states. It is an organization composed of farmers almost exclusively. All political parties are represented in its membership, hence it is not partisan. It is a national organization, with subordinate branches.

"The National Grange appoints a legislative committee to represent the interests of the farmers. That legislative committee is composed of Mr. Norris, of New York, Mr. Bachelder, of New Hampshire, and myself. We came here to advocate legislation which we believe will be to our interests, and to oppose legislation which we believe will be against our interests. We believe that the lowering of duty on sugar would injure us, and would injure all the farming interests in this country. I do not speak for any special class of farmers. In 1890 we shipped abroad a little over eight hundred million dollars' worth of our products from the farms of this country. The same year we shipped into this country, of all other agricultural products, nearly four hundred million dollars' worth, or nearly half as much as we shipped abroad. Now, we do not believe that this is for the best interests of our farmers or the best interests of the nation. We believe every product that is necessary for our consumption, which it is possible to grow upon our soil, should be grown by our own people. This would reduce the foreign importation of these products, which is taking our money away; it would leave the money in our own country for our own people to use in diversifying our agricultural interests.

"Now, as a farmer I do not raise any sugar-beets—have no interest in any sugar-factory. I speak for the general interests of the farmers of the land, and for the general prosperity of the country. If we can get some of the farmers to diversify their crops and withdraw from the grain-growing and from the stock-raising business to some extent, and engage in growing sugar-beets, it would reduce competition and be to the best interests of all. I also believe that this government should foster the industry of agriculture as it fosters and encourages other industries of this country. We believe that this policy will eventually reduce the price to all consumers.

"We believe that charity should begin at home; we should first take care of the interests of our own people, and then consider the welfare of the peoples of other countries. I believe any such lowering of the duty on sugar as is contemplated will cripple one of the most important of the new industries in which our people have engaged, and thereby, directly or indirectly, affect the pocket of every farmer in the country. I believe, as a matter of fact, that the profits accruing to agriculture are very much less than the profits accruing to other industries. It is universally conceded that agriculture is the most indispensable industry of the country, and annually adds more to the wealth of the country than any other single industry. When we advance the interest of agriculture we incidentally benefit all other legitimate interests. We believe that to be for the best interests of all. Upon this general principle, therefore, I oppose, and I am sure our organization, as well as the farmers generally, are opposed to the lowering of the tariff on sugar at this time.

"Mr. Swanson—'Has your organization taken any action on the matter?'

"Mr. Jones—'Not upon this specific matter; but upon the broad ground, which I stated before, it stands as a unit.'

"Mr. McClellan—'In other words, the free-trade farmers think we ought to make an exception in favor of farm products.'

"Mr. Jones—'The free-trade farmers think that while protection is the policy of this government, they should have their share of it. They are not fools enough to object to this.'

"The Chairman—'Statistics and the facts show that there are not very many free-trade farmers, anyway.'"

AFTER consideration of the several measures before it the House Committee on Agriculture framed and reported a new anti-oleo bill, stronger in its provisions than the original Grout Bill or any of the substitutes offered. The old Grout Bill is embodied in the new bill, changed only in the use of the word "made" instead of "colored" in semblance of butter.

To the original Grout Bill were added the following sections:

Section 2. That the first clause of Section 3 of an Act, entitled "An Act defining butter, also imposing a tax upon and regulating the manufacture, sale, importation and exportation of oleomargarin," be amended by adding thereto, after the word "oleomargarin" at the end of said clause, the following words: "And any person who sells, vends or furnishes oleomargarin for the use and consumption of others, except to his own family and guests thereof without compensation, who shall add to or mix with such olemargarin any ingredients or color that causes it to look like butter, shall also be held to be a manufacturer of oleomargarin, within the meaning of said act, and subject to the provisions thereof.

Section 4. That wholesale dealers in oleomargarin shall keep such books and render such returns in relation thereto as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may by regulation require, and such books shall be open at all times to the inspection of any internal revenue officer or agent; and any person who willfully violates any of the provisions of this section shall for each such offense be fined not less than fifty dollars and not exceeding five hundred dollars, and imprisoned not less than thirty days nor more than six months.

Agricultural News and Notes

In the state of Delaware the total acreage planted to tomatoes is only exceeded by the corn, wheat and hay crops. Tomatoes constitute three fourths of all the vegetable crops grown in the state.

The dairy interest in Connecticut is the principal one, constituting as it does about one third the gross income of the farmers. The poultry and egg production is only second in importance.

Of the various agricultural products, where the demand is likely to exceed the supply, none occupies a more favorable position than flaxseed. The Northwest, which has heretofore been depended upon for the greatest supply, is likely to find a vigorous competitor in the South and Southwest as soon as the best date for seeding can be determined.

There are now said to be over half a million silos in America, whereas twenty years ago the whole number did not exceed twenty-five. The advantage of feeding succulent food during the winter instead of dry fodder is now acknowledged, and as a result silos are being constructed wherever the dairying interest is the leading one.

One of the heaviest single cattle deals in eastern Mississippi took place on November 19th, when Mr. J. E. Crothers received one thousand head of Texas cattle to be fattened on cotton-seed products. During the one hundred days of the contract for feeding them it is stated that fifteen hundred tons of cotton-seed hulls and three hundred tons of cotton-seed meal will be consumed. It seems that the suggestions of Hon. James Wilson, Secretary of Agriculture, are being carried out on a scale that will prove highly gratifying to him.

Shrinkage of corn in the crib is a subject of special interest to the farmer, the buyer and the statistician. Several experiment stations have instituted a series of trials with a view of getting at the facts. Bulletin No. 45 of the Iowa Experiment Station states that from October to January seven thousand pounds lost by drying in the crib six hundred and thirty pounds; from January to April two hundred and twenty pounds, and from July to October one hundred and ninety pounds—the loss during the whole period being fourteen hundred and thirty pounds. The crib was refilled again with seven thousand pounds, and the shrinkage at the end of six months was four hundred pounds, and at the end of nine months five hundred and twenty pounds. The loss during the year was only six hundred and thirty-five pounds. It was shown that the degree of moisture in the air had a material effect in increasing or lessening the aggregate weight of the crop. The Iowa experiments indicate a loss in the first experiment of a little over twenty per cent, and in the other of about nine per cent. When first husked fully twenty-five per cent of the weight of the ears lie in the cob. An elaborate set of experiments in a more moist climate in the eastern section of New York showed that the cobs lost in weight between October and March fully thirty-six per cent.

From the reports issued by the Michigan Experiment Station it is shown that in one case fifty-seven hundred and twenty-five pounds of corn was cribbed in October when it was damp and heavy. When weighed again on February 13th the loss was a little over thirty per cent, or about one third. This, however, was regarded as an extreme case. A large number of experiments made by corn-growers in Iowa, Michigan, Ohio and Illinois go to show that the average loss during the period when the corn is cribbed until sold or used before a second crop is grown is about eleven per cent. One of the most important trials was made in Illinois with sixteen thousand one hundred and fifty-five bushels of seventy pounds each. When sold in the month of July it showed a shrinkage of twelve hundred and fifty-eight bushels, or a small fraction less than seven and three fourths per cent. Grain-dealers formerly allowed from seven to eight per cent for shrinkage, but weather conditions during the fall and winter will often render it desirable on their part to approximate a percentage of at least ten, which ought to be in the main acceptable to the grower. A simple method of determining the shrinkage in a short time is to put fifty bushels of seventy pounds each of ear corn in bags and place the lot in a warm place, where the excess of moisture will soon be evaporated. This method ought be alike satisfactory to the producer and consumer.

Multiply the length by the breadth, and the resulting product by the height to obtain the cubic feet, and then multiply this product by four and strike off the right-hand figure. The remaining figures will be the approximate number of bushels of shelled corn.

W. M. K.

RURAL AFFAIRS

New York State Fruit-growers The growth of the New York State Fruit-Growers' Association, which held its first annual meeting in Syracuse, January 8 and 9, is really phenomenal. In less than a year's time it has reached a membership of nearly seven hundred, saved thousands of dollars to its members by its carefully collected and reliable crop reports; was awarded the first prize (three hundred dollars) for its fruit exhibit at the state fair, an easy victor over its second competitor, the mother society (Western New York Horticultural) and a gold medal for its Pan-American show of fruits. All this shows that the time was ripe for the organization of such a society of commercial fruit-growers, which can hold itself entirely independent from all nurserymen's interests. But while the primary impulse for the new move was given by a clash of interests between nurserymen and fruit-growers, especially a difference of opinion concerning the legislation needed to check the spread of the dreaded new pest, the San Jose, or pernicious, scale, not a word, to my knowledge, was said during all the discussions in Syracuse about such legislation. It is understood, however, that the nurserymen have come to the fruit-growers with terms of peace, and that the legislative committees of the Western New York Horticultural Society, of the State Fruit-Growers' Association, and, I believe, of the Nurserymen's League are now working in perfect harmony for the purpose of securing such legislation as may be expected to accomplish best results in the fight against the pernicious scale. This is as it should be. This development has also had the desirable effect of reconciling the clashing interests to such an extent that the Western New York Horticultural Society will hereafter have no warmer supporters than the members of the State Fruit-growers' Association, who a year ago were ready to sacrifice the older society. The hatchet seems to be buried out of sight. All must admit that the fruit interests, not only of New York State but of the whole country east of the Rockies, owe much of their wonderful development to the Western New York Horticultural Society and to its famous leaders, especially the Barrys.

The annual membership fee was fixed last year at one dollar. A change in this rate can only be made by a change in the constitution, and this only after given timely notice to the members. For this one dollar the member expects a copy of the yearly report, the secret crop reports during the fruit season, and all other advantages connected with the membership in the association. It seems to me that this is trying to get much for little. It appears plainly that the one dollar is not enough to cover all the necessary expenses of the association, and an increase of this fee is proposed, and, indeed, absolutely unavoidable. It seems strange, however, that many of the members, some of them receiving hundreds of dollars in return for the one dollar, should oppose any such increase. President Yeomans stated in his annual address that a large apple-dealer is reported to have said that the crop reports of the New York State Fruit-Growers' Association had forced him to pay one dollar a barrel more for his apples than he could have gotten them for otherwise. In consideration of such benefits resulting from the work of the association, it seems that Mr. J. H. Hale's proposition to make the annual fee five dollars and the life membership fifty dollars, is not far out of the way. In short, it is worth a good deal to belong to a live organization of this kind, and no practical fruit-grower should begrudge a few dollars to secure the benefits of membership. The case is similar with all organizations which aim to bring soil-tillers into close touch for mutual improvement and common interests.

The Artificial Comb-Honey Canard The scientific joker can do about as much mischief as the practical joker. When a few years ago the bee-keeping fraternity waxed extremely wrathy, and hot words began to buzz around the ears of the fellow with a title of professor and a government position who was responsible for the story of the artificial comb-honey, this gentleman excused it as "a scientific pleasantry." But the bee-keepers could see nothing pleasant in the injury which the story, coming from an alleged expert and an officer of the Agricultural Department, had wrought to the trade in comb-honey; neither did they try to make it very pleasant for him in return. Since then not much, to my knowledge, has been said about artificial comb-honey until a few weeks ago when, to my amazement, I found in an agricultural (not a secular) paper—a bright, spicy, sprightly and skilfully-edited monthly—an extract from a paper read by our friend John M. Stahl at the annual meeting of the National Agricultural Press League containing the following paragraph:

"On my vacation in Michigan last summer I got some real honey—the real sweet kind, with a comb that chews up beeswaxy. It was so good that for three months after I came back I tried to get some honey in Chicago, but I could not find it. Of course, every grocery-store had what it said was strictly pure honey, in the nicest looking combs—too nice looking; it was plain that it was all manufactured. A few days ago my grocer told me that he had some real honey this time. I was certain of that, too, as soon as I saw it. I have worked with bees and know the earmarks of their handiwork, and that comb was irregular enough, imperfect enough in places to fool me. I bought two pounds, and when I got it home and took a mouthful the honey was not sweet—it was a poor grade of glucose, and the comb melted in my mouth—it was paraffin."

I read and reread this. Could it be possible that such a story came from John M. Stahl, who is undoubtedly a thoroughly honest and well-meaning man? Could it have been told in such an audience without protest by some one among those brainy men? Mr. Stahl must have heard of the "scientific pleasantry" perpetrated a few years before, but it is not likely that he intended his story as a repetition of that little joke. For a time I was puzzled what to think of it, but finally made up my mind that the people of our times have too much sense to be influenced by this stale story. I now find, however, that the bee-keepers are complaining about the falling off of the demand for comb-honey and, wishing to enter a vigorous protest against the quoted remarks, I am willing to stake my reputation on the assertion that there is not a pound of artificially manufactured comb-honey in Chicago, or in any other city. The mechanical difficulties of manufacturing honey, either out of wax or paraffin, have never yet been overcome, and I believe a standing reward of one thousand dollars is offered for proof of the existence of a comb-honey factory, and has been without a taker for twenty years. It is plain, too, that machine-made comb-honey would look as near alike as one egg looks like another. Examine the boxes found in any grocery-store and you will notice variation enough between any two sections to convince you at once that they could not have been made by the same machine. Mr. Stahl, in his day, may have worked with bees and honey, but it must have been with antiquated hives and any old thing of old boxes for surplus. The honey of earlier days surely did not look so very nice, or "too nice." Under present management, and with modern equipments, however, we can raise comb-honey that is almost as perfect as if turned out by perfect-working machinery. I have on hand a case or two of comb-honey made by my bees. I saw them make it. This honey is so pretty that I have saved it for "showing off," although its high quality is a strong temptation for me to break into the cases and begin to place the honey on the table. If friend Stahl had visited the honey exhibit at the Pan-American during the past summer he would have found plenty of just as fine and nice-looking honey in the show-cases, and the bees busy at work making it right along. Now, will you be good and retract? It is due to the bee-keepers and to the honey-trade interests.

Co-operation in Buying The benefits of membership extend not only over the sale of products, but often also over the purchase of supplies. One or more fertilizer firms, for instance, have given to the association and all its members, individually, a certain uniform low scale of prices on fertilizers. In this item alone some members, who are extensive buyers and users of fertilizers and fertilizing materials, will be able to save a large percentage of expense. The quotation for acid phosphate, for instance, was so low that Mr. Hale, who is probably one of the heaviest buyers of such goods, considered the offer "a bargain." Add to these benefits the reliable information brought out during the discussions, the many helpful suggestions which are received by the members, it seems undeniable that the membership fee—whether one dollar or five—is returned to each member in many ways. As Mr. Hale stated, the money expended by the members in keeping their organization up to the highest working standard, is the very best investment a fruit-grower can make. T. GREINER.

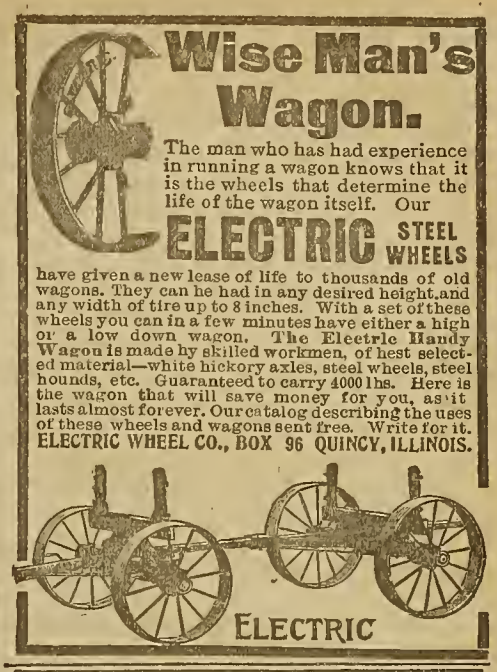
SALIENT FARM NOTES

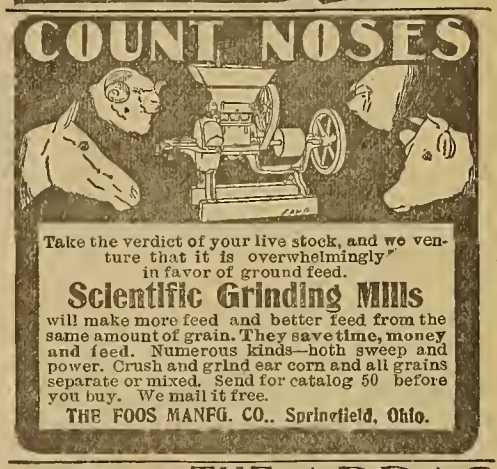
Early Feed for Stock One of the problems that thousands of farmers are pondering just now is that of growing early feed for stock. What shall we sow or plant for this purpose? What will make a bite of feed the earliest? What shall we plant for midsummer feed? All of these are questions of the greatest importance just at this time. In many sections the pastures were so badly injured by the drought last year that there will be little or no pasturage the coming spring, and as the supply of dry feed on hand is rather short something must be grown as quickly as possible. I have been asking quite a number of farmers what they are going to do about it and, while some have not yet decided just what they will do, most of those interviewed have settled on oats as the crop they will rely upon for the earliest feed. Quite a number of those whose pastures were burned out last summer sowed rye last fall for early spring pasture, and they will have a "green bite" quite early, and this will be followed by the oats they will sow as soon as they can work the soil. Many have the land plowed now, and if the spring is favorable oats will be sown earlier than ever before. A large area was seeded to timothy last fall, and the land was better prepared than I ever saw it. There will also be a large area sown to clover and timothy the coming spring, both with oats and without any "nurse crop." With a favorable season these will make good pasturage soon after midsummer, but it will be advisable to remember the value of sweet-corn and to plant it liberally. I have never known any farmer who regretted that he had planted sweet-corn for hog or milk-cow feed.

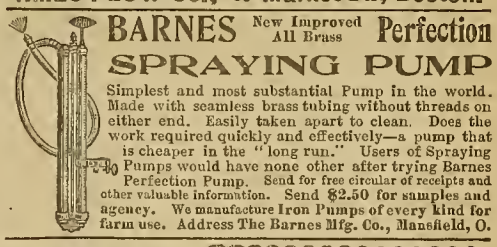
Sweet-Corn Last summer the pastures began to fail rapidly at the beginning of July, and in a short time there was no grass. Then was the time sweet-corn proved a blessing. It was just at its best, and it lasted to the latter part of August and made good, rich, succulent feed despite the drought and heat. From the time sweet-corn begins to ear until it is ripe it makes better and richer pig and milk-cow feed than anything else that can be grown, not excepting the much-lauded rape. It will be well to keep in mind that corn is high in price, and will be too high for pig feed until the next crop is well on toward ripening. If an abundance of sweet-corn is grown pigs can be carried through the latter part of summer and up to the ripening of the earliest corn without the least trouble. When grass begins to fail along in midsummer the usual practice is to begin feeding more corn in order to keep the pigs moving toward pork. Sweet-corn can be made, when desired, to take the place of old corn to a great extent, and nothing will be lost by the substitution.

I would plant two varieties of sweet-corn, one early and one late. One of the best early varieties for feed is Crosby's Early. It is an old, well-known variety, and seed can be had at a reasonable price. The best late is the old Evergreen, and I would plant three or four times as much of it as of the earlier kind. Crosby's may be planted in rows three feet apart, the hills two feet apart, but Evergreen should have more room, because it is much taller, on rich soil reaching the size of the ordinary varieties of dent corn. The planting should not be done until the soil is fairly warm and will work nicely. Nothing is gained by planting too early, or while the soil is cold, but much is lost, because the corn will not start well nor grow well. To get a strong, vigorous growth we must have a vigorous start and a strong plant. As with dent corn the land should be harrowed repeatedly until the plants appear, first with the harrow-teeth perpendicular, then as the grain sprouts slant them backward so they will not cut in too deep. If the soil between the rows is kept stirred and not allowed to bake the land can be plowed as soon as the corn is cut off and again planted to Evergreen sweet-corn for a fall crop. Or it may be planted with cow-peas or sown with rye. Some farmers let the land run to weeds when the corn is removed, but that is foolishness. If the soil has not been allowed to bake hard another crop can be planted and the soil kept occupied the entire season. The plat intended for this early forage crop may be manured any time before spring opens, or, if commercial fertilizer is used it may be applied at the time of planting. The soil should be fairly rich to begin with, and if cow-peas are planted on it after the corn is cut, and turned under in the fall the same plat may be used for this very same purpose many successive years.

FRED GRUNDY.







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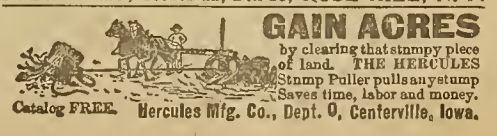

OUR FARM

Farm Theory and Practice

Care of Stable Manure.—Competent authorities estimate that the annual loss of fertility on American farms resulting from the careless handling of farm manure is many tens of millions of dollars. Our attention has been called to the subject insistently in late years by the farm papers and experiment station bulletins. What is the matter, anyway, that conditions favoring loss continue on so many farms? Do the owners not believe manure is valuable when first produced, and that it is convertible into good cash when intelligently used? Do they not know that the soluble portions are the most valuable, and that it is the soluble part that leaches away when it gets a chance? There must be reasons for the neglect one observes on so many farms, and I am puzzled when I try to account for the slow acceptance of the best teaching about the care of stable manure.

Where Waste is Worst.—It is not big farm incomes that cause carelessness, because I think I have observed as much of it in districts that did not have a profitable agriculture as in the more prosperous regions. On mountain dairy-farms that had to use Western grain largely I have seen the rich manure piled under the eaves of the barns and losing its best part in every rain, while the dairymen lamented the meager net returns from milk after feed bills were paid. On land naturally stronger and adapted to the production of grain for market I have seen all the liquid manure wasted, and the solid manure drenched by rains, while complaint was constant that clover no longer grew well and grain yields were diminishing. A considerable percentage of farmers now save manure carefully, but a larger percentage continue to permit waste, and the reasons for this fact interest and perplex a careful observer.

Value Not Known.—The value of good manure is not realized by many. There are various reasons why this is so. They may never have saved the liquid part, which is about one half in value, and the solid part may have lost part of its strength by leaching or heating. If so, it is no wonder they do not believe the half that is said about the plant-food in manure. The excrement originally contains over three fourths of all the soil-fertility that went into the feed when it was grown, but a pile of leached, solid manure is like a lot of tea-grounds in relation to original strength. It does not give marked returns for the labor of spreading, and hence commercial fertilizers are made the chief dependence.

Another cause of failure to appreciate manure sufficiently to care for it as one would care for any other valuable farm product is the poor result gotten because applications are not made wisely. It is a too common custom to dump the manure unevenly on little fields near the barn, oftentimes plowing it down as fast as spread. It would take a vast amount of commercial fertilizer to give marked results if applied in this way. Evenness in application is a point to be watched, and manure should remain near the surface of the land for a considerable time. Its soluble part tends to go down. More than this, if the supply of manure is not unusually big, it should be used so far as is necessary to make a growth of some kind of sod that will finally be plowed down. On thin land a light and even dressing of manure may save a stand of clover, and it will always strengthen it, giving good returns finally from the manure used in this way.

Method of Saving.—But when the value of all manure is appreciated, and when the most profitable way of using it is known, there are doubts about ability to prevent loss, and herein is cause of some carelessness. The question continually comes up, "Does not manure lose either when left under a roof or in a pit outside or when spread on fields fast as made during the winter?" It is true that it may lose under any of these conditions, but the loss is not necessarily great. The manure-shed is all right for stable manure, but the treatment must be controlled by common sense. Loose manure will heat, because the air can enter it freely, and heating manure is losing ammonia rapidly. The manure should be spread over the surface of the floor and tramped tight by stock. That excludes the air. More than this, there must be some moisture.

Ordinarily, where cows are kept, there will be moisture enough. If not, pour water on the manure. In this way one need not have fear of serious loss.

In a basin with a tight clay bottom long manure may be kept out of doors without serious loss, probably, if the basin is never flooded by heavy rains so that an excess of water runs off, taking the best fertility with it. But many pits in barn-yards do let the fertility escape.

The usual advice is to spread fast as made. Two objections are urged—the ground is often too soft for the wagon or too icy for safe spreading, or the manure is wanted for a special purpose later in the year.

Spreading as Made.—I do not fear to say that far more is now lost in manure-yards than ever lost by spreading on frozen ground, and yet it is true that the surface of the ground is sometimes roofed with ice so that a dashing rain removes everything lying on the ice. The man who spreads direct from the stables takes a risk at such a time, but his risk is far less than that of the man who piles manure in an open barn-yard on sloping land. The soil has a strong affinity for manure, and hooks on to it tightly if it gets a chance. The most of the year the soil can get hold of the soluble part of manure that has been spread. Bnt sometimes the ground is too soft for a team, and there is often good reason for wanting the manure for special seasons of the year.

A Scheme That Works.—The first thing to do is to determine that all unnecessary waste shall stop. The liquid manure must be saved. The manure must not be piled in a sloping barn-yard. Tight stable floors with plenty of absorbents mean a valuable product. When it can be drawn direct to the field to thicken a sod, or be taken up and held by the soil, the loss is almost nothing, so far as we know. It is the safe way. But when there is ice, or when for any other reason it is not desirable to draw out the manure fast as made, it should be stored safely as possible. A cheap shed is best, and the manure must be packed tightly by the tramping of animals, and the mass must be kept reasonably moist. The applications to the land should be even as possible, and made first of all to insure growth of clover and grass, if this be necessary.

The best care and the wisest use of farm manures call for skill. In limited sections of our country the manure gets the best attention, and every year we are waking up more and more in this respect, but the European farmer yet remains far in advance of the majority of American farmers in his appreciation of the home-made supply of plant-food.

David.

Potato Culture

A correspondent writes, inquiring what we consider the most important essentials in late potato culture aside from the selection of seed, which he apparently considers largely a matter of individual preference, or the suitability of certain varieties as regards market demands and adaptability to location, and bars, also, the selection of particular kinds of soil, which with him, as with thousands of other growers, is practically arbitrary, having but one general class of soil on his farm.

Omitting the consideration of natural conditions that cannot be controlled, such as rainfall, atmospheric and general weather conditions, and referring only to essentials that may be provided by the grower, it remains then that adequate feeding with suitable forms of plant-food and a thorough, careful cultivation of the potato-field are the most important factors in profitable culture.

A very considerable amount of the required plant-food may be secured to the crop by proper cultivation to cause the soil to yield up a portion of its natural stores. It has been found that the supply of fertility adequate for this or any other crop exists in the average soil in ample quantities to last for centuries. But this material is not in a form available for the immediate uses of the plant, and is therefore not a plant-food in fact, but a potential or undeveloped fertility. The object and efforts of the cultivator should be to develop this locked-up fertility into an available form of plant-food.

Different yields effected by means of culture only is quite frequently evidenced when two farmers crop adjoining fields in virtually the same state of fertility without manuring where any decided variance in the yield of the respective crops must essentially be the direct result of different methods of cultivation. It has been repeatedly noted that this difference was that between total failure and profitable success as a result of different culture.

Observing the methods employed by Nature in developing this potential fertility into active plant-food, it is found to be a simple process of disintegration of the soil to permit the exposure of greatly increased surfaces to the action of atmospheric influences, which assists in producing the change from unavailable to available forms. It is well, then, to follow up this scheme of Nature by assisting in this liberating operation, which is accomplished by natural forces, but very slowly, as substantially the same effects are secured by a very thorough cultivation in releasing this latent plant-food.

To the greatest number of growers, the general farmer or those not having access to ample supplies of natural manures, and who for some reason do not use commercial fertilizers, the matter of cultivation—thorough, intelligent, regular, frequent cultivation—must certainly be considered one of the main essentials to successful potato-growing, since in addition to the aeration of the soil necessary to promote root growth it provides, incidentally, a large amount of plant-food.

Cultivation should begin soon after planting, using such light tools as are at hand to keep the surface-soil perfectly loose; and if rows have been ridged in planting go the cross way two or three times with a heavy harrow to smooth off the field before the sprouts are even with the average surface-level, afterward using the weeder or light diamond-tooth harrow with teeth slanted toward the rear to prevent tearing out the plant. The horse hoe or cultivator should be started just as soon as the rows can be followed, stirring up the soil as deeply as practical, holding the cultivator as close to the row as is possible without actually uprooting the plant. We repeat this deep, close cultivation at intervals of from three to four days for two or three weeks, allowing the cultivator-teeth to run more shallow and further from the plant at each cultivation thereafter, continually keeping the surface-soil loosened and well aired if the ground is kept wet from rains, or maintaining a perfect dust mulch to retain moisture if dry.

Incidental with our cultivation of the crop we have generally found it very profitable to stir into the soil on each side of the rows during the time that the vines are making their rankest growth some form of plant-food that is soluble and immediately available for the use of the feeding roots. Where the appearance of the field indicates the need of a complete manure we apply from two hundred to six hundred pounds of a strictly high-grade complete potato-manure containing the three elements in soluble forms.

The leaf and vine have much to do with the formation of the tuber. The starch is formed by the action of the sunlight on, and is fed to the tuber through, the leaf, and to secure the best results the vine must be kept in a steady, rapid growth and the leaf in a healthy condition during the heaviest vine formation, and every factor that has any influence upon such growth should be given the grower's attention.

Bordeaux spraying should not be neglected where blight is prevalent, nor the application delayed until too late to intercept any ill effects that will certainly result from even the lightest attack of this disease, as the development of the potato tuber is unfavorably affected to the extent of the impairment of vitality produced by all types of leaf-blight, the injury to the vine by the potato-beetle, or any check caused by lack of cultivation, moisture or available plant-food at any period during the season.

The potato-beetle may be effectually held in check by adding some insecticide to the Bordeaux mixture when spraying with this fungicide, or applied separately. In any event do not allow the bugs to seriously damage the leaves before applying some efficacious remedy. Begin early—beforehand applications are the only positive guarantee against failure in dealing with the potato-bug; eleventh-hour labor

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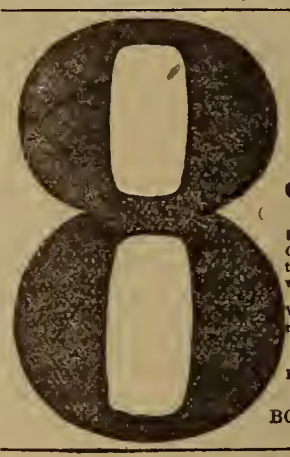
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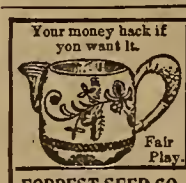
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and expense with either the beetle or blight might better be reserved and employed in some more practical work. We have never yet failed in preventing any material loss, in either quantity or quality, from either of the above causes where proper remedies were applied promptly and in a thorough manner.

Moisture may not often be practically supplied artificially, but the greater amount of water received by the soil may be conserved by proper cultivation to provide a surface mulch that will retain moisture by arresting evaporation from the lower soil surrounding the root system. The injurious effects of a drought may be materially lessened and the vines safely tided over the danger period by the timely application of from one hundred to one hundred and fifty pounds an acre of nitrate of soda, stirred into the soil on each side of the row, as soon as the vines appear affected by such conditions. This salt being readily dissolved by very little moisture, and even by the slight dampening of the surface-soil by an ordinary fall of dew over night—being a moisture-gatherer naturally—is immediately available to the root and is easily assimilated by the plant, acting as a direct stimulant in producing a succulent growth of vine that is quickly noticeable in the darkening green of the foliage. These applications should be repeated at such intervals as the appearance of the field indicates the necessity of such fertilization. We do not ordinarily practice ridging of the row in finally laying by the crop, but always leave a decided furrow in the center between the rows, as we find that this serves the purpose of draining all the surface-water from the soil immediately over the row, protecting the tubers from late rotting, as well as reserving the excess of waterfall to settle gradually into the soil later.

It is well to add in conclusion that profitable production is largely contingent upon cost of digging, handling and marketing a crop after being successfully grown. The markets and the conveniences of marketing should be taken largely into consideration before the crop is planted. The less handling that is made necessary, the better, both as regards expense and keeping condition. The digging is reduced to the minimum of cost by the use of the horse-power digger, and every grower of two acres or more should own and use one of the various makes that he may find best adapted to his needs. R. M. W.

Cuban Agriculture—Sugar and Tobacco

[CONTINUED FROM PAGE 1]

required. There are some instances where capital to the amount of two million dollars is invested in a single holding. On these larger plantations all the modern improvements for the culture of the crop and the manufacture of the product have been introduced. Many miles of railroad have been built to carry the cane to the mills, the most improved furnaces and clarifiers have been constructed and every arrangement made to handle the crop quickly and advantageously.

From three to five hundred employees are maintained on one of these large plantations during the busy season, which lasts from December to June. The help consists principally of negroes, which class, as a rule, furnishes the most constant and reliable labor. The women work with the men and get the same wages. This arrangement is desirable for the reason that the women can do as much as the men and they watch their husbands and keep them straight. An experienced overseer will always give the preference to a man and wife over any other combination when he has the choice. Spaniards and Asiatics are dangerous in the fields on account of their constant smoking. The latter class has to be watched continually to keep them from shirking. A very strict system is necessary in governing this class of labor. When the employees' names are put on the company's pay-roll, quarters are assigned and tools and eating utensils issued to each person. These articles are charged to the laborer and credited when returned. Gambling or smoking in the fields are considered sufficient causes for instant dismissal. Salaries are paid daily. Medicine, consisting chiefly of quinine, is furnished free to sick employees. The rising-bell sounds daily at four o'clock in the morning. After coffee is served the hands go to the fields. They come in for breakfast at eleven o'clock and rest until one. At six o'clock they come to dinner and at eight the bell sounds for silence. An overseer is always popular who will make occasional exceptions to the silence rule and allow the negroes to sing and dance in their quarters after the usual hour. During the day sentinels are posted on the mills to watch for cane-fires, and armed guards patrol the property at night.

The largest crop of sugar the island has produced amounted to one million two hundred thousand tons, which sold in the market for eighty million dollars. The price the Cuban planters receive for their cane depends upon the market the manufacturers get for the sugar, and this in turn is governed by the quantity and quality raised by the other sugar-producing countries. The greatest factor in the sugar trade of the world is Germany. She produces the greatest amount and regulates the price for all. The New York buyer gives for the Cuban product the equivalent of what it costs him to get the same quality in Germany. Consequently the island planter has the advantage of his German competitor, because he does not have to ship far and his freight is cheap.

Cuba's future as a sugar-producing country depends solely upon what kind of a market is afforded her in the United States. Her resources for the production of the staple are very great. The largest crop she has yet produced was raised upon one fourteenth the area available for its culture. If her product is allowed to come into the States free, along with that of Porto Rico and Hawaii, all her sugar lands will soon be under cultivation and she will lead the world. On the other hand, if a duty is imposed on her product, while that of the other countries continues to come in free, she cannot meet the competition and the greater portion of her fertile cane lands will doubtless soon be put to other uses.

The cultivation of tobacco in Cuba dates back hundreds of years. When the island was discovered, the natives were found engaged in its culture and addicted to its use. For many years the industry was conducted as a crown monopoly. After it was released a tax of one twentieth of each crop was collected by the crown. The business has always suffered the restrictions of heavy taxation. The value of the crop some years runs as high as twenty-five million dollars. Nearly half of each season's crop is retained for home consumption. The Cuban is a constant smoker. The culture of tobacco in Cuba varies somewhat from the practices in vogue in the States. Instead of sowing the seed in prepared beds, the Cuban planter prefers virgin soil. High ground is always used for the first planting if available, the altitude being advantageous to the first growth of the young plants. After a growth of eight or ten inches has been made, the transplanting to the prepared ground takes place. Cuban tobacco cannot stand too much heat and for this reason nearly all the fields where it is grown are well shaded with fruit-trees. On every plantation can be seen large tanks which are utilized to hold the rain-water, so that in time of drought the crop need not suffer. No modern methods of irrigation have been introduced and the watering is all done by hand. In the absence of rainfall the crop is watered about every ten days. The same seed is used everywhere throughout the island, the difference in the quality of the product of the different sections being due to the varying strength of the soil and the care and attention bestowed upon the crop. Cuban tobacco supplies the best cigar trade of the world. Many of the largest factories in Havana devote their entire output to filling orders for the royalty of Europe and the magnates of America.

Seed-corn

A number of Iowa and Illinois farmers, readers of "Wallaces' Farmer," have written to me in regard to using two-year-old seed-corn this next spring. As a rule it is not advisable to use old seed-corn. Such seed does not usually produce as thrifty and vigorous plants as new seed. If the ears of corn were not fully mature, or thoroughly dried out when harvested, the chances are that the freezing temperature will injure the vitality of the seed.

Seed-corn that was fully mature when harvested, and stored in a safe place where it thoroughly dried out, will likely grow even after several years. In some cases good corn has been harvested from three or four year old seed when it has been kept under the best conditions. No comparison between the yield of such seed-corn and new seed-corn has been made, but it is a well-established fact that old seed-corn is not as good as new seed. If two-year-old seed-corn is known to have been harvested and stored under the best conditions it might be advisable to use it if good new seed-corn cannot be secured. However, the experience of hundreds of successful corn-growers is that the best plan is to get new seed.

Another frequent question is whether the seed which was not fully filled out last summer on account of the hot winds and drought is safe seed-corn. There is no question but that this seed is not as good as the corn grown under favorable conditions and well filled out. However, there is little question but that if good ears are selected, even if they are not filled out, that such seed will produce a crop next season. If the poor filling out of the tips and butts is not the fault of the variety, but of the weather, it is likely that if this seed is planted on good soil, and the season is favorable, the ends of the ears will fill out. If the season is unfavorable it is likely that the seed hurt by the hot winds last season will not produce as good results as corn grown form well-filled-out seed. In fact, it is the opinion of experienced corn-growers that if the drought and hot winds have injured the ears of corn that such seed should not be planted.

In every case the vitality of the seed-corn should be thoroughly tested. The vitality can be easily and practically tested at this time. Fill a box or ordinary china dinner-plate with fine sand. Thoroughly moisten this sand. Take three kernels out of every ear—one from near the tip, one from near the middle, and the third from near the butt of the ear. Place one hundred kernels point down in the sand in every plate, and turn a second slightly smaller plate over the first, to prevent the too rapid evaporation of the moisture. Set in a warm place, and keep the sand moist. Examine every day, and keep a record of the number of kernels that germinate in the following form:

Date .....
Name of variety.....
Name of tester.....
Number of seed.....

Date	Temperature	Number of Kernels Germinated	Per Cent Germinated
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

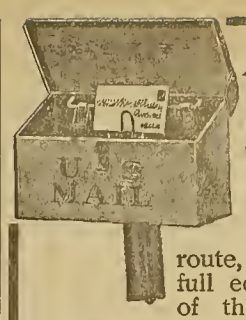
In seven days ninety-seven per cent should have germinated. If less than this per cent sprout it shows weak vitality. However, to find the rotten kernels the ears should first be nubbed, then shelled by hand. In the ears of corn with deep indentation it is not possible to tell by looking over the ear any rotted kernels; when the ears are shelled by hand every kernel can be seen, and all injured kernels discarded. —A. D. Shamel, in Wallaces' Farmer.

RIGHT is right in all simplicity, and either the teachings of the great prophets are false or they are to be reckoned with daily in all the common affairs of human life upon the earth.—W. J. Jupp.

Correspondence

FROM WASHINGTON.—The Puget Sound country is especially adapted in many respects to dairying and stock-raising. The climate is mild and equable, the soil rich and land cheap. Being surrounded by mountains there is an abundance of running water, thousands of streams pouring their cold currents down from the snow-capped summits. Clover and other grasses grow spontaneously wherever the sun strikes the ground. The cost of clearing away the timber averages rather high, but the cultivated crops correspond in luxuriance to the original timber crop. Hay produces three to four tons to the acre and grain and vegetables in proportion. The large and constantly increasing non-productive class in the shingle-mills, logging-camps, mines and fisheries furnish a profitable home market for farm products. The writer has lived in northwestern Washington for seventeen years and the greater part of the time has been interested in farming and stock-raising. I can confidently recommend this region especially for stock-raising. A. L. S.

Lynden, Washington.



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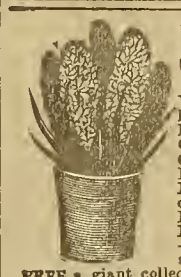
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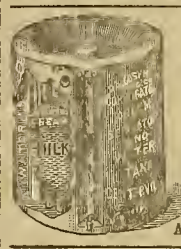
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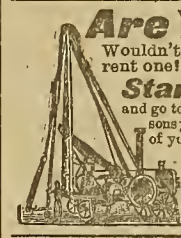
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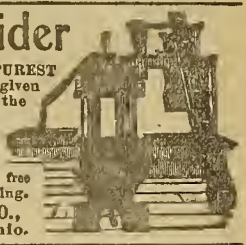

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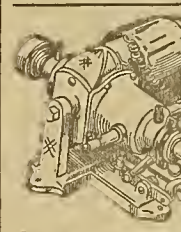
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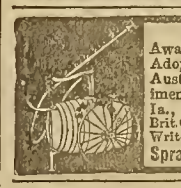
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Notes From Garden and Field

PEACHES, PEARS, APRICOTS.—A reader (J. S. McF.) of Chautauqua County, New York, asks me for a list of good peaches to give a succession throughout the season. He desires also a list of good pears. I plead ignorance so far as the peaches are concerned, as I have not grown any peaches worth mentioning in a dozen years. With the advent of the yellows in this immediate vicinity began the downfall of the once flourishing peach industry. We have within easy walking distance only one or two peach orchards, and even in these one tree after another is succumbing to the disease. Yet if I were situated near Lake Ontario in this county, or on any slope having naturally drained soil of more or less sandy character, or in Chautauqua County near Lake Erie, I believe I would quickly start a peach orchard. In such locations, with high cultivation and proper feeding with potash, good peach crops can still be grown, notwithstanding the yellows, rots, leaf-curl or any other disease. In these favored spots the Crawfords (both early and late) are yet the favorite varieties for market during the main peach season. We used to grow Alexander and Amsden for first early, and I believe they are yet of value. The trees are liable to overbear, in which case the fruit is small and inferior. Vigorous thinning is necessary for all very early peaches, and will give good-sized fruits of fairly good quality. Mountain Rose comes next, to be treated in the same manner. Chair's Choice was named by Mr. Hale and others, during the recent meeting of the New York State Fruit-growers' Association, as one of the very choicest and most profitable of all peaches. In my planting I would depend on the Crawfords, Elberta, Hill's Chili (which is one of the hardiest in bud) and Salway. We grow plenty of pears around here, but in market operations confine ourselves practically to four sorts—namely, Bartlett, Angouleme (Duchesse), Anjou and Keiffer. The Duchesse is surely and rapidly losing ground. Growers now have no courage to plant it, and the older orchards are gradually running out. The demand for it now is not what it used to be. Being grown on dwarf stock, it needs highest culture to give fruit that is good for anything. In my present state of mind (and with the present outlook for selling this pear) I would rather cut down trees than plant new ones. The great pear of profit in this pear region, with canneries eager to buy the crop, is the Bartlett. For home use I would plant a Manning's Elizabeth. The fruit of this pear is small, but extremely early and very good. The tree a regular and full bearer. Next I would have a Clapp's Favorite, which also bears quite regularly with full crops. The pear is of good size, beautiful when well colored, and quite good when well ripened. It should be gathered promptly when full size is reached, otherwise it is liable to rot from the core. Next comes Bartlett. This is the mainstay for canning, is a good pear to eat out of hand, and can be had in prime condition for a month or more. A tree each of Tyson and Rostiezer would come handy. For later we might want an Angouleme (Duchesse), and we surely want a Bosc, also a Louise Bonne, a Boussock, a Buffum, a Flemish Beauty and possibly a Sheldon, but surely a Seckel or two. For winter we want a Winter Nelis, and a Josephine de Malines and possibly a Lawrence or Clairgeau. My favorite for early winter is the Anjou. This ordinarily ripens in November, sometimes as early as October, but can easily be kept until January. My way of managing them is by gathering carefully and promptly, then putting in crates or baskets in a cool room or shed, then wrapping in waxed paper and packing in oats in kegs or barrels. If stored in a cool place they will ripen up in November and December and are a treat. The same correspondent asks about apricots. The fact that he can grow them successfully proves the advantages of his location. I know of but one large tree in my vicinity. This seldom bears fruit. When it does bear the fruit is not of best quality.

GREENFLY ON MELONS.—A Kansas reader (E. W.), last summer asked me, "What will keep lice from killing melons?" The best way is not to have the greenfly get on the melon-plants. A thrifty, growing vine is hardly ever attacked—at least in my experience. The remedy, therefore, is to have the soil extremely rich and well worked. If the greenflies do get on the plants the only way to get rid of them is by using some substance that will kill them by contact. The remedies usually recommended are kerosene emulsion or strong tobacco tea. The former must be carefully made in order to avoid injury to the plants. For that reason in similar cases I prefer the tobacco tea. But whatever we use the application must be made from the underside of the leaf, as most of the lice are feeding there. We must have a tube attached to the sprayer (knapsack) with nozzle-end turned up so that this end can be held under the vines, near the ground, and the spray be delivered in an upward direction. Greenflies sometimes make their appearance here in the greenhouse, on egg-plants, tomato and pepper plants, forced cucumber-vines, etc. But if they ever get numerous enough to do serious damage it is our own fault, as the greenhouse operator is supposed to fumigate by burning tobacco stems at least once or twice a week right along.

GROWING SPINDLING PLANTS.—I have often been asked how far from the glass tomato, cabbage and celery plants can be grown with safety—that is, without danger of their growing up slim and spindling. The usual rule for hotbeds is to have the soil come very close to the sash-covering. Surely this rule is a good one. We often see hotbeds made with high sides all around, resembling deep boxes, the soil being a foot to eighteen inches away from the glass. In such beds plants will surely grow spindling, not because the glass is too far away from the soil, but on account of the dark sides. Sunlight should have a chance to strike the plants directly not only at noon, but during the morning and evening as well. In the greenhouse I prefer the lower edge of the glass of sides or roof to come down to nearly the level of the soil surface on the benches, although, as the area is so much wider than an ordinary hotbed, the plants (except next to the eaves where dark side walls run up much above the bench-level) are well exposed to direct sunlight and not liable to run up spindling so long as proper space is allowed to them. We can raise just as nice stocky plants as anyone could wish in the center of the greenhouse where the glass is five or more feet above the bench soil. It is crowding more than anything that makes cripples and weaklings.

T. GREINER.

Orchard and Small Fruits

CONDUCTED BY SAMUEL B. GREEN

San Jose Scale

The Connecticut Experiment Station has made some interesting studies of the San Jose scale-insect, the results of which are embodied in a recent bulletin, which shows that it is liable to become a terrible scourge and requires careful management to hold it in check. Buyers of nursery stock should see to it that stock bought is not infected. The summary of the results in this bulletin is as follows:

(1) The San Jose scale appeared and caused much destruction of fruit-trees in California twenty years ago. China is probably the country of its origin.

(2) It was first found in the Eastern states in 1893, and now occurs in nearly all the states of the Union except, perhaps, the extreme northern ones.

(3) The scale was brought into Connecticut on nursery stock ten years ago, but not discovered until 1895. Seventy-eight infested localities had been found up to July 1, 1901, when the Insect Pest Law went into effect.

(4) The station began the work of inspecting nurseries in 1897, at the request of nurserymen. This enabled them to ship stock into other states where inspection laws existed. Fifty inspections were made and thirty-nine certificates granted under this arrangement. Twenty-five other states had already enacted inspection laws.

(5) The full-grown female scale gives birth to living young, which crawl about for a short time and then settle upon the bark. There are three or four generations each season. They feed by sucking the juices from the tree. Each female may produce from less than one hundred to six hundred young.

(6) The scale is inconspicuous and is seldom noticed until the vitality of the tree is impaired, at which time the bark is usually coated with a roughish gray substance. The reddish discoloration may be found around each individual. Leaves and fruit are also attacked. The female scale is nearly circular in outline, while the male is somewhat elongated. If the scale is lifted the insect proper may be seen underneath, by the aid of a lens, as a yellow object.

(7) Common fruit-trees and plants of the rose family are usually preferred by the insect, but it is liable to attack almost any variety of tree or plant that may be growing near infested trees.

(8) Though the young scales crawl short distances, they are usually carried from one tree to another by other insects, or upon the feet of birds. They may also be carried upon fallen leaves or fruit.

(9) The vitality of the tree is gradually lessened by the hordes of insects sucking its sap. The pest is seldom noticed until some of the twigs die. Trees have been killed in four years in Connecticut by the scale.

(10) Spraying the trees just before leaves appear in the spring, with crude oil, or with a mechanical mixture of kerosene oil and water, using twenty per cent kerosene, is the best remedy that we can now recommend for large orchard trees.

Whale-oil soap and water, in the proportion of two pounds of soap to one gallon of water, sprayed upon the dormant trees, is also an effective treatment. Growing trees may be treated with fifteen per cent kerosene and water, or whale-oil soap (one pound in five gallons of water). For nursery stock, fumigating with hydrocyanic acid gas is the cheapest and most effective treatment.

Inquiries Answered

Book on Pruning Grape-vines.—H. K., Salem, O. The best treatise on the pruning of grape-vines is a little book, entitled "Grape Training," by L. H. Bailey. This book is sold by the Orange Judd Company, of New York City. As a general book on the grape, including training, I think the Bushberg catalogue is best. It is published by Bush & Meissner, Bushberg, Mo., and sold at one dollar.

Fungus Disease.—L. O., Fruitvale, Cal. I do not know the trouble with your Loganberry leaves, but it is evidently some fungus disease which has attacked them. I think that probably the best treatment for them would be to spray the foliage with Bordeaux mixture as soon as the disease appears. If it appears every year try to apply it before it shows. Bordeaux mixture is a preventive and not a remedy, so the foliage should be kept covered with it until the time for infection is past.

Transplanting Grape-vines.—R. A. S., Spring Hill, Kan. The best time for you to transplant your grape-vines would be as early in the spring as the ground will work well. They should be trimmed back severely, leaving little more than a stump sufficient to reach to the trellis, if they are not more than an inch in diameter at the surface of the ground; if they are larger than this they should be cut off at the surface of the ground. If these vines are injured on one side, as I judge may be the case from your letter, I would suggest that you cut them off at the top of the ground before you transplant them, but I would also suggest that instead of transplanting these old vines that you would do better to throw them away and start with new thrifty vines two years old. You can get these at a very low price and they will give you much better success than you can possibly expect from these old ones. The chances are it would not pay you to bother with vines such as you describe.

Budding and Trimming Peach-trees.—W. E. K., Callery, Pa. Peach-trees which were budded last autumn should be cut back in the spring about the time the buds begin to swell. In cutting them cut about four inches above the bud and later on, after the buds have started well, cut the stub of stocks to just about the place where the bud has started. Do not allow any shoots to come out except one from the bud which has been inserted. Peach-trees can be budded in the spring, but it is not generally so successful as summer budding. If you are going to try budding in the spring it would be necessary to cut the scions in the latter part of winter and then keep them in an ice-house until the bark has started on the trees, in the spring. Peach seedlings are so cheap that it is generally considered that the best plan is to throw away those that have not been budded successfully when they are first tried, as the second season they become too large to work to advantage.

Spraying with Kerosene.—J. S. M., Dungannon, Ohio. The results generally obtained by spraying with clear kerosene oil have not been as satisfactory as those which have been obtained by the use of crude petroleum. The former is much more expensive. However, I have used it for scale-insects on willows, apple-trees and others to good advantage in a small way and without any injury to the tree. This, too, is the experience of many others, but occasionally poor results follow its use, and it is not generally so successful as crude petroleum. No oil will take the place of Bordeaux mixture. The oil is used as an insecticide and the Bordeaux mixture is a fungicide. I have had considerable trouble with getting satisfactory results in the use of Bordeaux mixture on plum-trees and have a number of times burned the foliage. This is also the general experience with peach and cherry trees. This class of fruits have quite susceptible foliage and the Bordeaux mixture should be very weak. It would be quite out of the question for me to tell you within the limits of an article of this kind about when to spray unless I knew the particular object of the spraying. If you wish to use kerosene for the scale-insects I should think your best plan would be to apply it on a bright, dry day in winter or very early in the spring when the tree is dormant.

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The Early Chicks

PREPARATIONS for spring should be made now for the hen and chickens when they come off, which may be as early as next month. The coops should be tight except on one side or front, which should have upright slats or bars two inches apart, two of which should be movable to put the hen in. Make the coop without bottom, keep it on dry ground, or some other dry place and move often or it will become tainted. Little chicks should be fed regularly and each should get its share. Some persons throw down great lumps of dough and the old hen and a few of the strongest chicks get all while those that need it most get none. Pinhead oatmeal and millet-seed should be given three times a day during the first few days after hatching. Milk, bread-crumbs, corn-meal dough and wheat screenings may be given during the first two weeks. Chicks should not be fed more than they can eat up clean; "little and often" is better than too much. They should have fresh water twice a day. Do not let the water stand in troughs or other vessels until it becomes foul. It is best to have a small stream of clear running water in the poultry-yard where it can be so arranged. Gravel and sand will be found beneficial in the yard for the chickens to pick up. After chickens become eight or ten weeks old they do not require much attention, as they can then partially assist themselves, but they should be kept growing all the time until disposed of or have attained their growth.

Hard and Soft Foods

Grains should be scattered over the ground far and wide for the hens to hunt and find them, as the feed-trough, so far as the feeding of grain is concerned, sometimes does more harm than good, the hens not being induced to work if they can walk up to the trough and eat whenever they wish; but when soft food is given it should always be in the trough, as a large portion will be wasted if thrown on the ground. The waste of grain when ground and moistened is very large, and as it soon begins to ferment if the season is warm it assists to invite disease in the flock. As soon as the fowls have finished their meal the food should be removed and the trough cleaned. It is always better to feed but once a day in summer, as the fowls do not need as much at that season as in winter, and the feeding-places should be cleaned off occasionally. Ducks should not be fed at the same place longer than a week before changing to a new location, as they create filth rapidly and cause a very disagreeable odor.

Feeding in Winter

The cold days of winter should induce all to feed in such a manner that the hens will be warm and comfortable. Although the shelter is a very important matter as an aid in saving heat, yet the food is what produces the warmth. The fowls should not be fed to excess, however, as the aim should be to simply supply the bodily warmth needed and to increase the production of eggs. Fowls can be so fed as to be warm and also to give a profit. Corn, though rich in fat, is deficient in muscle and bone elements. Corn and wheat, with a proportion of meat, milk and clover, bran and middlings, should afford sufficient variety.

The Large Lice

The large lice will be found on fowls even when apparently no lice can be seen in the poultry-house. The hen when somewhat fat is not so readily attacked by lice, as she is provided with an oil-sac at the base of the tail, from which she derives oil not only as a protection against lice, but to assist in cleaning her feathers. The large lice, therefore, congregate on the heads and necks. If the hen is poor in flesh lice may be found on all parts of her body. An excellent remedy is lard, and only a small portion should be used, which should be rubbed on the skin of the heads and necks. The fowls should then be held by the legs, head downward and thoroughly dusted with insect-powder. The advertised lice-killers are also very efficient. The quarters must be kept very clean. Once a week is not very often to give such attention to hens in summer. Go into the hen-house at night and force a few drops of warm lard in among the feathers of the head and neck with a sewing-machine oil-can. In winter once every two weeks will answer.

Feathering of Chicks

Some chicks feather slowly and seem long and gawky until well advanced in growth. The feathering of chicks depends upon several matters, but much on the breed of the chick. The chicks of non-sitting breeds seem to begin to shoot out feathers from the wings before they are a week old, which is a drawback, as rapid feathering is weakening. Brahma and Cochin chicks feather very slowly, sometimes appearing almost naked for weeks; but they are hardy and stand it well, as they are not weakened by rapid feathering. When chickens feather slowly more of them are raised, as they are not debilitated by growing a large covering of feathers at an age when they cannot endure the process.

Cut Bone

Cut bone is one of the cheapest and best foods that can be used. For providing lime for the hens cut bone is better than anything else, and should be given daily. It is not advisable to give egg-shells unless they are broken up very fine, otherwise the hen may learn to break and eat the eggs. Variety of food will provide lime in sufficiency, but bone should never be omitted. Fowls are machines to produce eggs and flesh, and we might as well expect cloth from the factory that has no wool or cotton as to expect eggs from hens not supplied with proper food. Liberal feeding means liberal profits; neglect means loss of what you do give them.

Corn-meal and Chicks

When the young chicks come the food is important. Cracked corn and corn-meal are excellent foods for chicks if given with other kinds. Fed exclusively on either they will starve on it, because it does not contain sufficient of the muscle-producing and bone-forming elements. It is like feeding a human being on exclusively one kind of food. It may be palatable for awhile, but soon becomes repulsive. Chicks should have a variety. It is not necessary to give a bill of fare for them; simply feed anything they will eat, such as cracked corn, wheat, pinhead oatmeal, bone-meal, sharp grit, finely cut clover, lean meat, milk-curds, millet-seed, cabbage, cooked potatoes, turnips or any food, but no one kind exclusively.

Inquiries Answered

Hens Very Fat.—J. A. S., Colbert, Kansas, writes: "My hens are very fat. One third of the number are molting. They do not lay. Shall I kill them, or is there a remedy?"

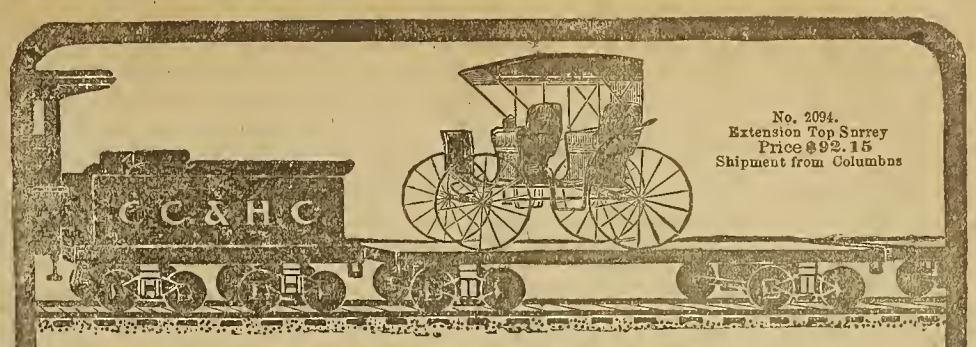
REPLY:—It is cheaper to send such fowls to market. The supposed molting may be feather-pulling. When hens become excessively fat they do not lay many eggs and it is a loss of time and money to attempt to get them into laying condition again. They will also bring high prices when fat and are more valuable in the market-stalls.

Feeding Potatoes.—W. C. S., North Monroeville, Ohio, writes: "Are potatoes suitable for poultry? We feed them cooked, adding oats when the mess is hot."

REPLY:—Potatoes make an excellent addition to the diet. Being mostly starch the addition of ground grain and animal-meat should form an excellent egg-producing food. Do not overfeed, and the hens will lay.

Lice Remedies.—B. W. J., Atkinson, Neb. writes: "Our fowls have lice and we would like a remedy."

REPLY:—First, keep the poultry-house clean and provide a dust-bath. Anoint heads with melted lard and dust bodies with insect-powder. The cheapest, best and quickest mode of ridding fowls of lice is to use the advertised lice-killers which are prepared especially for that purpose.



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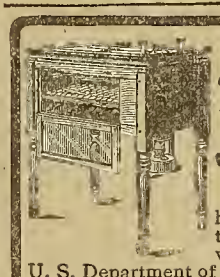

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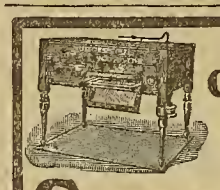

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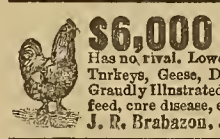

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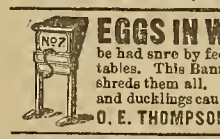

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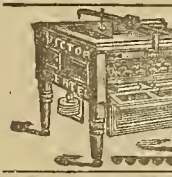

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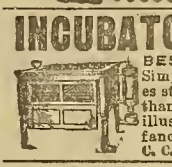

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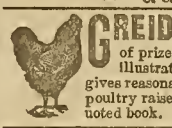

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Agalactia.—D. W. I., Eaton, Ind. If by the time this reaches you, you have not succeeded in drawing any milk from your cow, which you say dropped a calf the first week in January, I doubt very much whether you will succeed in getting any, at least not until she has another calf. Might it be possible that the cow, without your knowledge, attends herself to the milking, and therefore has nothing for you when you come with your pail? If such should be the case, put a halter with a broad and strong leather nose-band full of sharp nails pointing outward on her head, and thus make the self-milking business objectionable to her.

Stomach-worms and Lung-worms of Sheep.—R. J. S., Greenwich, Ohio. Stomach-worms (Strongylus contortus) can be expelled, and the disease produced by them can be cured, provided the remedies are applied in time, or before any irreparable injuries have been produced. Lung-worms (Strongylus filaris) having their seat in the ramifications of the bronchi are inaccessible to medicines and cannot be expelled by medication. Smoking the afflicted animals by burning leather and other substances producing an offensive smoke, so often recommended by careless advisers, is far more injurious to the host than to the parasites, and will affect the latter but very little, if any.

Is Very Lame and Walks on the Toe and Outside(?) of Hoof.—M. L. W., Greenfield, Ohio. According to your statements there are several possibilities, and all that can be concluded from the same is that your horse is badly crippled. Severe lameness and walking on the toe-part of the hoof would indicate a morbid contraction of the flexor tendons, but twisting the foot and walking on "the outside of the hoof," as you express yourself, would have another cause. It might be caused by ring-bone, especially if affecting the lower joint, by some other injury to one of the lower phalanges, or possibly by navicular disease. I therefore have to advise you to have your horse examined by a competent veterinarian.

Looks Like a Septic Infection.—W. H. R., Wolcott, N. Y. If you had made persistent applications of cold water when your horse wounded himself by over-reaching in consequence of being tired out, and had not used the hot water, the salt and vinegar and other irritating things, probably nothing serious would have happened. If the wound has not yet healed, dress it twice a day with iodoform, or if it is rather superficial, with a mixture of liquid subacetate of lead and olive-oil, one of the former to three of the latter, give the swelled part of the leg a good rubbing either with the hand or with a woolen rag several times a day, or rub in once a day a little gray mercurial ointment along the course of the principal veins and lymphatics on the median surface of the swelled part of the leg.

Slobbers Continually.—C. O. F., Ottawa, Kan. You say your young cow, which a month ago had her first calf, slobbers continually, had first a good flow of milk, which is daily decreasing, is in fairly good order, has a somewhat rough appearance and shows a decreasing and somewhat vitiated appetite. Probably the most frequent cause of slobbering consists in eating hay, but clover hay in particular, that is contaminated with fungus spores. If your cow does not receive such hay, look for other possible causes and examine her mouth for a defective or diseased grinder or molar, and if such cannot be found, examine further and look for an obstruction somewhere in the posterior part of the mouth or in the throat, consisting perhaps in a morbid growth, possibly of a tuberculous nature. If such a tuberculous morbid growth constitutes the cause there is no remedy, but if it is something else the removal of the cause will certainly constitute the remedy.

Castration of Lambs—A Swelling at the Poll of a Horse.—I. P. N., Hill Top, Ark. The castration of male lambs is a very simple operation, which, however, can be performed in different ways. One way, unquestionably the simplest, but perhaps not the best, is to take a "waxed end" made by a shoemaker, to make a castration noose in it, to slip the latter over the scrotum with the testicles inside, and then to draw the noose as tight as possible, which finishes the operation. Of course, before the noose is applied it must be ascertained that there is no scrotal hernia, for if there is this method is not applicable. In a short time, a few weeks, scrotum and testicles will drop off and no sore will be left. Another method is to open the scrotum by means of a drawing cut with a sharp knife, wide enough to cause the testicle to descend through the cut, and then either to put a ligature around the spermatic cord and to cut away the testicle beneath the ligature, or to scrape the spermatic cord with the edge of the knife until it parts. After one side has been finished the other must be treated in the same way. If a ligature is used it must be drawn as tight as possible. If there should be some bleeding it will be well to wash out the scrotum with some clean water after the operation is finished. There are other more complicated methods, but these are seldom employed. So, for instance, after the incision into the scrotum has been made, the testicles may be removed by means of an ecraseur, or the spermatic cord may be severed by means of a red-hot iron made knife-shape.——The swelling on the poll of your horse is probably nothing more than a bruise, or possibly a cystic tumor produced by an effusion of serum in the tissues in consequence of bruising and the growth of a fibrous membrane around it, or else bruising may have effected an abnormal accumulation of fluid in the bursa of the ligament of the neck. Whatever it may be, such a swelling as you describe may exist for years without doing any damage, provided it is left alone. If it is not, and is constantly irritated by applications of turpentine or by so-called counter-irritants, or if the skin is lesioned in any other way, a poll-evil is very apt to result, and then a surgical operation will become necessary. A fresh bruise is best treated with applications of cold water.

Quitter.—E. S., Waltonville, Ill. What you describe appears to be a so-called quitter, or fistula of the cartilage of the hoof. You ask a good many questions about your case, some of which it seems to me are irrelevant. I will, therefore, answer the essential ones. (1) If you keep on blistering and applying liniments, and thereby irritate the diseased foot more and more, the prospect of recovery will be bad, and the horse will either die of pyemia, or if kept alive in spite of everything will most likely become a worthless cripple. The applications of liniments and blisters are not only uncalled for, but are absolutely injurious. A complicated quitter is bad enough without such applications. What the final outcome will be if, after this reaches you, a rational treatment is applied I cannot tell, because I do not know, and without a thorough examination made by myself cannot know in what condition the foot is and what parts and tissues have already been destroyed or have been irreparably injured. If it is not yet too late the following treatment, if you faithfully apply it, will effect a cure: First clean, bathe and disinfect diseased foot with a one-per-mille (1:1000) solution of corrosive sublimate in clean rainwater. This done, carefully probe (best with a whalebone probe) every fistulous canal, so as to learn its exact extent and direction. Having done this, insert into each one, clear to the end, a bougie, to be prepared by your druggist as follows: Take half an ounce, or even one ounce, of finely powdered corrosive sublimate, half an ounce of powdered gum acacia, put in a mortar, and add enough distilled water to make it, when thoroughly mixed, a mass of the consistency of syrup, then put it into a test-tube of such a size that the mass will stand at least four inches high in the tube. Then take some good cotton cord or twine, about one eighth of an inch thick, cut it into lengths of about eight inches; put a knot in one end of each length, insert a common pin into each knot, and bend the pin like a hook; fix the test-tube in a perpendicular position, take hold of a length of twine by the knot and dip the free end into the mass in the test-tube—like dipping an old-fashioned candle—then, by means of the pin-hook, hang the dipped cord on another cord stretched horizontally in a convenient place. Having thus disposed of the first cord, dip another one and treat it in the same way. Suppose thus a dozen cords are dipped, then the first one will be sufficiently dry to dip it the second time, then the second one, the third one, and so on until all have been dipped twice. Then, again beginning with the first, the third dipping can be made, and after the third the fourth, and so on until every end of cord or twine is perfectly coated with a layer of the mixture of corrosive sublimate. Since corrosive sublimate is very heavy and dissolves only to a very small extent in the small quantity of water used, the mixture in the test-tube must be shaken up every few minutes. If the mixture is too thick it will be difficult to push the end of the cord down to the bottom, and if too thin too many dippings will be necessary to get the dipped ends perfectly coated. As soon as the dipped cords are dry and hard, which will not take very long, one can be inserted into each fistulous canal. Extra length can be clipped off with a pair of scissors in such a way that about a fourth of an inch of the cord will project over the surface or out of the hole. To keep the bougies in place, and at the same time to protect the diseased foot against external injurious influences, it will be advisable to bandage the diseased foot as soon as the bougies have been inserted. In about three days the bandage may be removed and the bougies, of which nothing will have been left but the bare ends of cord, may be taken out. This done, the foot should be washed and cleaned with a one-per-mille solution of corrosive sublimate in water and again be bandaged with a clean bandage. In a few days more so-called pipes will come out of the fistulous canals, and if then the latter look clean and cease to suppurate and to produce excessive granulation (so-called proud flesh) nothing more will be necessary but to keep the diseased foot clean and to have it bandaged once a day with a clean bandage. If on probing the fistulous canals before the bougies are introduced it should be found that the interior end of a fistulous canal is lower than the external outlet, it will be necessary to pare away enough horn (with a sharp hoof-knife) to sufficiently lower the external opening. If on removing the bougies it is found that suppuration and excessive granulation does not cease a second bougie will have to be inserted the same as before. In regard to what you ask about spavin and ring-bone I refer you to the FARM AND FIRESIDE of November 1, 1901.

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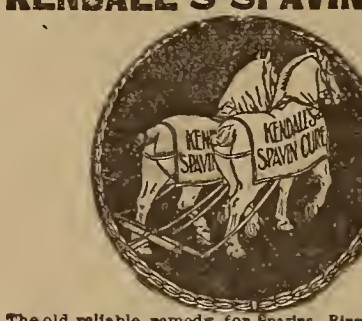

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Religion, morality and knowledge, being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.—Dr. Manasseh Cutler.

Current Comment

Taxation For years economists have been devising means to render the tax burden less onerous to the individual. Theories have been advanced by some, and as quickly denounced by theorists of another school. Practical business men have advanced their views, but as yet little has been accomplished toward tax reform. Just now the granges of several states are making strenuous efforts to overcome the evils of taxation.

Let us understand ourselves. What is the point at issue? Do we want to reduce the total amount raised by taxation, or do we want to see it more judiciously expended and the burden more equally distributed?

Most well-informed people desire the latter. Few object to the amount raised. Many there are who believe that if judiciously expended the amount could be increased with beneficial results to the state and individual. The complaint against the present system is that the burdens fall more heavily upon the middle class than upon those better able to bear the increased burden; that the benefit received is not commensurate with the amount paid; that public concerns are not managed with the same business acumen as are private enterprises.

No matter how finely spun are the theories against tax-dodging, not one property owner out of a thousand but will evade in so far as he can the payment of just taxes. The heavy tax that the farmers and small-home owners pay is not, as many solace themselves with believing, the result of class legislation, but the legitimate outcome of the inherent desire to dodge taxation. But as his property is all in sight he cannot conceal it if he would. This works doubly against agriculture. It deters men with a small sum from buying property, and it also keeps property-owners from adding improvements, fearing that said improvements would add more in tax than they would yield in profit or pleasure.

Awakened public conscience, which is but an euphonious name for self-preservation of the small property-owners, is now demanding that stocks, bonds, franchises and valuable special privileges shall bear their fair share of tax burden. One cannot pick up a daily paper but he is confronted with the details of efforts to bring concealed property to light. The successful results encourage others to begin suit for proper returns of property. A few instances in point follow:

The decision that the Union Traction Company of Illinois, which was listed last year at $3,500,000, is now placed at a fair cash value of $75,000,000 over and above the assessment on their tangible property, has been sustained by the higher court. This would yield $1,000,000 of surplus tax for 1900.

By a decision of Solicitor Wishard, of the Internal Revenue Department, the estate of the late Cornelius Vanderbilt must pay an inheritance tax to Uncle Sam of $361,803.43. The state tax paid was $520,995.

Investigation backed by a quickened public opinion would bring to light thousands of cases similar to the above.

The unbusinesslike methods of public finance are another cause of dissatisfaction. In general it may be said if public business was carried on with the same acumen and careful business methods as are private enterprises it could be done for less than half what is now expended.

I believe the majority of public officials are honest. I know that there are glaring examples to the contrary, yet a large majority are honorable. But the notion that public money is common property, and that he who has access to it has a right to get all he can out of it, is fastened firmly upon nine tenths of humanity. Not a "perfect right" says the new official whose conscience has not been tarnished, but a "precedent right."

Then there is a small army of pensioners of public bounty who depend on public work for a livelihood. The ranks are constantly augmented by those who have helped the new officials in. Unnecessary deputies and clerks; supplies of various sorts that are purchased at as good a bargain as possible, and charged up at the highest market rates, the difference going into the pockets of the officials; contracts for building purposes where buildings are not necessary—these are some of the commoner mistakes. Let the offiical be determined to economize, he is one against many. Howls that go up from these harpies would rend the heavens.

Too often his constituents after the fret of battle is over view him with envy. The charges against him find willing believers. They do not investigate the charges or analyze the causes. They are forgetful of the fact that thwarted ambition is the animus of most such vicious attacks. By sundry wise shakings of the heads, grave looks, "I told you so's" and doubtful whisperings they manage to throw suspicion on his every act, until he is compelled to yield to the desires of his tormentors. Thus they whom he would serve, and whose interests, were they not blinded by envy, would dictate to them to support him, become his enemies.

When it costs twice as much to conduct public institutions as it does private ones of the same nature, and double the amount to care for the state's few thousand criminals and unfortunates that it does to educate its hundreds of thousands of children, and four to six times as much to conduct offices in public departments as in private ones where the same amount of work is done, it is high time that public opinion be aroused to correct the abuses. The amount of money squandered, if judiciously used, would add thousands of miles of good roads to our country, would establish libraries, result in better schools, establish, equip and maintain many hospitals for the more scientific care of the sick and unfortunate, besides opening up avenues for the better development of our boys and girls.

Let the agitation for tax reform go on. Let us see that all interests bear their share of the tax burden, and that the taxes collected be honestly and judiciously spent. We do not ask that our tax be materially decreased, but that we shall reap a fair share of the benefits of taxation. To this end let us lend assistance in whatsoever way we can to accomplish the reform—by agitation, investigation, organization.

Intelligence of Birds Birds show many more human traits than do quadrupeds. That they actually fall in love admits of no doubt; that there is a period of courtship, during which the male uses all the arts he is capable of to win his mate, is equally certain; that there are jealousies and rivalries, and that the peace of families is often rudely disturbed by outside males or females, is a common observation.—John Burroughs.

Library and School Matters The inquiries concerning securing of libraries and the betterment of schools are gratifyingly large. We will not rest content until every grange avails itself of the education and recreative advantages of a good library. Who will be next?

Inquiries concerning traveling libraries are coming in from many states. We hope the inquirers have availed themselves of the opportunity of getting a good library at slight expense. Will not those who have established libraries or secured the traveling library write us telling how it was secured, the books received and how the patrons liked them? You will confer a favor on us by so doing.

President Roosevelt has signified his intention of recommending to Congress the increase of the powers of the Interstate Commerce Commission. This is a matter of sincere congratulation to the grange. Now let each aid in the matter. We have a fearless, determined executive. Let us imitate those excellent qualities.

Music in the Farm Home

What do we strive for most earnestly? For homes. Homes not only for shelter not only for comfort, but also homes that dignify, that ennoble, that satisfy in the true sense our best aspirations. True, the home is not all. Beyond it are grave and important social and civic duties. But give us the true home and the power and inclination to discharge all these shall be added unto us. The following is a good definition of home:

"Home's not merely roofs and walls,
Though with pictures hung and gilded;
Home is where affection calls;
Home is where the heart hath builded."

If there is a taste for "concord of sweet sounds," and nine tenths, perhaps forty-nine fiftieths, are so endowed in a greater or less degree, what is more conducive to the enjoyment of a home than music? The music need not necessarily be difficult or classical. If that can be had so much the better, but it isn't best to be too ambitious. There is a great body of good music—sacred, ballad and instrumental—which is not difficult and is within reach of the farm home.

When we come to instruments, those of the violin type, including the cello and viola, are easily the kings and queens. It is entirely within the power of the farmer's family to have a little orchestra of these instruments that will make the home delightful to its inmates and charming to others. But let none essay them unless assured of a true ear for music. With them the ear alone is the guide to the note produced, and a correct sense of tone is indispensable. Such instruments need not be expensive. One third of what is given for a piano usually would get many smaller instruments. And, if properly cared for, the longer they are used and the more they are played on the better and more valuable they will become; while the piano the day after it is bought is second-hand and worth about half-price and after a few years is nearly valueless.

Of course, the piano is a great instrument. We all know that. But everything has its place. I have long thought that the place for the piano—with exceptions to be sure—was not in the farmer's home. It is expensive in the first place and rapidly decreases in value, but these are not the worst objections. A piano to be tolerable must be tuned often. This is expensive and inconvenient for farmers. The result is that in most cases the farm piano is out of tune and out of the question for good music.

For farm homes I vote for the cabinet organ. Not the garish, cheap affair, with a great many so-called stops, with which so many farm homes have been humbugged. Look first to the quality of tone, which depends on the quality of the reeds, next to solidity of the case and fittings and durability of the bellows. If these are all right your cabinet organ is always in tune, always ready and will last for many years. If a reed or bellows give out they are easily replaced. I know of a cabinet organ that has been in use for over thirty years and is good to-day. Your cabinet organ will cost about one fourth what a piano will, and while it is not a great solo instrument it is pleasing and good for even the solo, and as an accompaniment to the voice or stringed instruments it is all that can be desired for the farm home. Henry M. Huggins.

Do not disturb your mind with other hopes or fears than reason may suggest; if you are pleased with prognostics of good you will be terrified likewise with tokens of evil, and your whole life will be a prey to superstition. Whatever facilitates our work is more than an omen, it is a cause of success. Samuel Johnson.

The lesson is forcibly taught that our life might be much easier and simpler than we make it; that the world might be a happier place than it is; that there is no need of struggles, convulsions and despairs, of the wringing of the hands and the gnashing of the teeth; that we miscreate our own evils. We interfere with the optimism of Nature; for, whenever we get this vantage-ground of the past, or of a wiser mind in present, we are able to discern that we are begirt with laws which execute themselves. —Emerson.

Nobility of character manifests itself at loopholes when it is not provided with large doors.—Mary. E. Wilkins.

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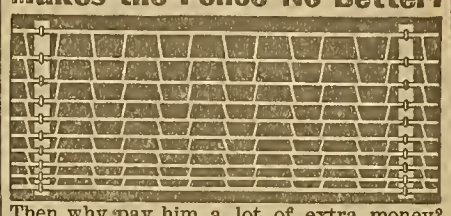

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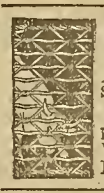

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WITH THE HOME-KEEPERS

BY W. D. MARSH

It is much a question of the present day whether our girls are growing up to be home-keepers. An observant person made the remark that although our higher grade schools closed at one thirty it did not seem of much benefit, as the girls spent most of the time from then on till five o'clock upon the street, at the library and in and out of the stores.

To be a good home-keeper is as mnch a business as any other legitimate business and needs constant attention. One cannot slight one thing here and another thing there day after day without it finally showing in a general sense of disorder.

While in the school-days a girl's life is so much taken up with various studies that she has little time to learn methods, but she should always have something in the work of the household that is hers to look after.

One family of my acquaintance, who had several girls, apportioned the marketing to one after another in turn, until they all learned the art of buying well. In the rush out into the world of many of our girls into new employments, the sacrifice of the girl who stays at home is apt to be underrated.

The one who makes home lovely, who has at all times the responsibility of meals to be served well and in order, is as much an important factor in the home as the one who earns the money. I have often felt it was much easier to earn a certain amount and pay out of it for board than to take the amount paid for board and reinvest it to do the most good. The close calculation and finesse used to well use money is a facnlty possessed by very few. There is a rnsh and go about outside life that breaks up the monotony; a life spent in the continnal rounds of daily housework is very confining and devoid of all interest. Housekeepers are advised to take daily walks, outdoor exercises and all such things, but we all know how impossible that is to many who must do everything alone.

Homes mnst be kept np in some way and there is always one who must shoulder the burden. It is a great charm in a girl who does this day in and day out in a cheerful, pleasant manner, who makes all feel that she herself is happy in attending to all the home-duties. All work is better done in cheerfulness, and it is the only way to lighten all labor. In the coming generation the girls who can keep house well will be so hard to find that no doubt there will be premiums offered for her.

No one can work in an office or school-room all day and go home at night and make home what it should be. Let no girl who reads this think because she is home, doing the duties there, that she isn't earning anything or isn't of any use in the world. It were better if more of our girls could be left in our homes. This constantly going out every day is apt to bring on a restless nature. The peace attending the home-keepers is becoming a thing of the past and much to be regretted. After all, "To stay at home is best."

A Handy Cleaning-Fluid

A good cleaning-fluid is a necessity if one would keep winter clothing looking well. Spots will come on dress-skirts, coats, vests and trousers, and coat-collars grow dingy, which makes the whole suit look shabby. Benzene or gasolene will clean fairly well if great care is taken, but the odor is very disagreeable and clings to a garment for many days. It is unsafe to use either of these fluids in a room where there is a fire, or to bring the garment near a fire for some hours after cleaning. I have known of two deaths which occnrred from carelessness in this respect. A cleaning-fluid, which is safe to use and has been very satisfactory to me, is made as follows:

Cut into small pieces one fourth of a pound of white Castile soap, and pour over it a quart of soft water; then put it on the back of the range where it will heat gradually and dissolve, but not boil. When well dissolved add four quarts of soft water, stirring the soap thoroughly through it. Take it off the fire and away from the stove and add one ounce of liquid ammonia, one ounce of alcohol and one ounce of ether. Stir vigoronsly until thoronghly blended. Bottle and cork tightly. When this fluid is used for sponging it may be used clear or diluted with water. When washing any woolen goods add two or three tablespoonfuls to a gallon of water.

A cleaner, which is better than a sponge, is made by rolling tightly a strip of soft, black wool goods into a cylinder abont three inches long and about one and one fourth inches in diameter, then wind with stout thread about an inch and a half of the middle of the roll, sew it firmly and make a loop which will slip easily over the neck of the bottle of cleaning-fluid. If this combination of cleaning-fluid and cleaner is kept where it is handy it will help a man to keep the spots rubbed off his clothes and make the periodical cleaning of his clothes by yourself less necessary.

MAIDA McL.

To Fill the Cooky-Jar

SUGAR COOKIES No. 1.—Two eggs, two cupfuls of granulated sugar, one cnpful of thin sour cream or rich buttermilk, one cupful of shortening, one teaspoonful of soda. Mix soft.

SUGAR COOKIES No. 2.—Four eggs, two cupfuls of granulated sugar, six tablespoonfuls of buttermilk, one cupful of shortening, one scant teaspoonful of soda, pinch of salt and a little nutmeg.

MOLASSES COOKIES No. 1.—One cupful each of light-brown sugar, molasses, buttermilk and shortening, two scant teaspoonfuls of soda, one teaspoonful of ginger, one fourth teaspoonful of ground cloves. Mix soft and bake in a hot oven.

MOLASSES COOKIES No. 2.—Two eggs, two and one half cupfuls of molasses, one and one half cupfuls of light-brown sugar, one and one half cupfuls of shortening, two thirds of a cupful of sour milk, two and one half teaspoonfuls of soda. Flavor with ginger, cinnamon and cloves.

STIRRED MOLASSES COOKIES.—One egg, one cupful of molasses, one cupful of brown sugar, one cupful of shortening, two teaspoonfuls of ginger and one teaspoonful of cinnamon. Place all these ingredients in a bowl without stirring. To a cupful of hot water add a teaspoonful of soda and at once stir it into the bowl. Stir in enough flour to make a soft dough. Turn out on the floured board, roll out and cut without mixing.

CREAM COOKIES.—Three eggs, one coffee-cupful of thick sour cream, one cupful of shortening, two cupfuls of granulated sugar, one teaspoonful of soda, one nutmeg or one tablespoonful of lemon extract.

HERMITS.—Three eggs, one and one half cupfuls of brown sngar, one cupful of shortening, one cupful of chopped raisins, one tablespoonful of soda dissolved in two tablespoonfnls of sour milk, half a teaspoonful each of cinnamon and nutmeg, one fourth teaspoonful of cloves. Mix soft.

PINWHEELS.—One pint of unsifted flour, one half teaspoonful of salt, two teaspoonfuls of baking-powder, and one tablespoonful of sugar. Rub through a sieve three times, add a generons tablespoonful of lard and one half tablespoonful of butter. Wet with a scant half pint of sweet milk. Roll out about half an inch thick, spread with soft butter and sprinkle thickly with sugar and cinnamon. Roll up like a roll of jelly-cake, cut in slices three fourths of an inch thick and bake in a hot oven.

GINGER DROPS.—One half cupful of sugar, one half cupful of shortening, one cupfnl of molasses, one teaspoonful each of cinnamon, ginger and cloves, two teaspoonfuls of soda in a cupful of boiling water, two and one half cupfuls of flour. The last thing add two well-beaten eggs. Bake in gem pans.

LEMON CRACKERS.—Two eggs, two and one half cupfuls of granulated sugar, one cupful of lard (not melted), one pint of sweet milk, five cents' worth of baking ammonia, five cents' worth of oil of lemon. Beat lard, eggs and sugar together. Grate the ammonia and put it, with the oil of lemon, in the milk. Mix the two and add all the flour you can mix in. They must be *very* stiff. Roll thin and bake in a moderate oven.

In all these recipes, except where the kind of shortening is named, cottolene has been used with satisfaction. For the molasses cookies or the spice cakes meat drippings may be nsed. All the cookies are improved by having granulated sugar sprinkled thickly over them before baking. Or desiccated cocoanut nsed in the same way makes a dainty finish.

HOPE DARING.

Congress of Mothers

The Sixth National Congress of Mothers will be held in Washington, D. C., the last week in February, beginning at 9:30 A. M., Tuesday, the 25th, the sessions continuing through Friday, the 28th. A very efficient committee will be in charge of the local arrangements. The incoming trains on Monday and Tuesday will be met by members of the reception committee. Delegates and visitors who are planning to attend the Congress should write for full particulars to Mrs. Robert Cotten, Corresponding Secretary N. C. M., "The Cairo," Washington, D. C. The usual reduction of a fare and one third for the round trip will be given.

Parsnip Stew

"Let's have a row of parsnips in the garden this year," we said in the spring. "We don't care much for them, but we can use a few in soups."

In the fall as a result of this decision there was a goodly quantity of parsnips in the cellar, while a few had been left to winter in the ground for spring use. Those in the cellar were packed in sand, and as the cellar was very dry, the sand was kept damp by an occasional sprinkling. This prevented wilting.

All my life I had heard of parsnip stew, but in my fourteen years of housekeeping I had never made one. It was a tradition in the family that we did not care for parsnips, while the stews I had eaten away from home had not appealed to me. Now I decided to try one.

"You want to use pork," I was told, but I knew better. I took a shin of beef—there was a foot or so of bone, but the larger part of the meat had been used for something else. When the bone had simmered a long time, so that the meat slipped off and the marrow slipped out, I put in equal quantities of peeled and sliced parsnips and potatoes. When the vegetables were done, I mixed up a little flour-and-water thickening—not more than a dessert spoonful of flour—with salt and a tiny bit of cayenne pepper. After this was added, the stew was allowed to bubble gently a few minutes.

There were vegetables enough so that the member of the family who could not endure to have things watery was satisfied, and the one who liked "juice" found no fault. To satisfy both tastes was a triumph.

The parsnip stew was a great success. "We could relish one every week all through the winter," was the verdict. The only question now is, will the parsnips hold out?

SUSAN BROWN ROBBINS.

Children Must Play

Of course they must. The more heartily they play, the more rapidly will they grow. This is the general rule; there are exceptions, of course. It is a pitable sight to see these unnaturally goody-goody little ones, who are too dignified to engage in the noisy, romping sports of their mates. If we notice carefully we will see that these childish recreations form some of the most fundamental processes of education.

Froebel first gave us the true idea of what play might be to a child. He causes us to understand that play is an educator; that it teaches the little one deftness and accuracy; that it enables the timid one to overcome his reticence and to forget himself in the kindly interest he takes in his playmates. Froebel would have us understand that if the play be misdirected, we should try the plan of substitution rather than complete elimination. Bend the energies, rather than endeavor to break them. By a little care and foresight on our part we can teach our darlings the art of helpfulness rather than the science—it really is almost a science with some—of mischief-making. We can greatly aid in the development of character by a little oversight in regard to their plays. And, by the way, the little ones are not the only ones who need a little directing and oversight in regard to their recreations. If we can weave one's recreations into an element of strength and character, we are doing much for that one's future usefulness.

We have all laughed at the eldest sister who told her younger one to go and see what baby was doing, and tell it to don't. But, really, too often we act on this principle ourselves, and say "don't" more than we ought. We so often say it because we are nervous, and not because there is really any reason why that doing should be "don't-ed."

Substitution and diversion are the key-notes to the training of children. If they are cross, if things do not suit them, if they have fallen and hurt themselves, if they want the moon, or the hammer and looking-glass, get their minds off of the subject by substituting something else. It is easily done. When the days are cold and stormy, and the children and young people must remain in the house, plan amusements. A delightful home game is played as follows:

One says, "I see something in this room that begins with R." Immediately the answers will be, "Rug," "rocking-chair," "rose," and so on. The one guessing correctly will have his turn. If it be a compound word, the initial letter of each word would better be given. When tired of this, they can change it somewhat by saying, "Now let's furnish a house." "I donate a carpet," the one on the right adds, "And I, a table," the next, "And I, an elevator," and so on. The initial letter of each furnishing must be the last letter of the preceding one. This game is capable of an almost limitless number of variations. They can plant trees in the same manner. One can plant a maple, the next an elm, the third a mulberry and the fourth a yew. Flowers and vegetables may be disposed of in the same manner. Such games not only amuse; they instruct. They are real recreations.

ELLA BARTLETT SIMMONS.

In Many Keys

One Saturday night, at the close of Railroad Day at the Pan-American, it was a struggle at going-home time to get even a foothold in the street-cars. Some were gasping for breath, some who seemed to be three deep on the seats, were trying to fan, when an energetic small woman began to talk to the calm-faced woman next to her as they held to adjoining straps:

"Did you see the couple married in the cage of lions?" asked the small woman, somewhat excitedly.

"No," was the reply.

"I did," again spoke the small woman. "I was almost near enough to put my hands on the cage when it was driven onto the esplanade. It was a little stretch of imagination when the reporters said the lions stood up and huffed and puffed and sniffed about. They laid on the bottom of the cage, their heads up a little, as dogs lie before the fireplace, comfortable and happy. They were well trained."

There was something very interesting in the face of the small woman. She was plainly, yet prettily, dressed except her summer hat was quite dilapidated. Her new box-coat showed her recent shopping in a city store.

"Are you a stranger visiting the Fair," asked the calm-faced woman.

"Yes, I have been here a whole week. I am through now. This is as long as I feel I had better stay, so I am content to start home. I live quite far West: we have a large farm, and my husband and I cannot leave it at the same time. I came in company with my brother, who has gone on to New York, so I will have to go home alone, but I do not mind that. My husband will come on later; I would not have him miss it for anything."

"Then you are pleased with the Fair?"

"Pleased? Why that very poorly expresses my delight. It has meant so much to me in many ways, and the strange part of it is that I had no idea of any profit out of it, but really it is going to be worth a great deal to us in actual money. I have been staying in a good boarding-home, but I consider that the whole week has been no expense or will be none in the end."

"I do not quite understand you," said the calm-faced woman with whom she was talking.

"We employ a great many on our large farm—that is, take all the year, we have many to provide for. We have tried to have, and really have had, quite a model establishment, but when there is time to carry out my schemes the profit and comfort of all will be increased. Beginning with small things, what I have learned about the use of rice is worth coming; I am grateful to the Louisiana Rice Kitchen not only for exact knowledge, but for opening my eyes to possibilities of rice and

chicken and other ways of preparing both. You know we have fowls until we tire of them. Then I took the five free cooking lessons in the hygienic cooking department, and when I get home we will use less white flour, and I am sure some of our employees who are not well will grow healthy again. I just wish every one that comes to the Fair could gain a part of what I have. I shall feel richer for years, besides all the beautiful things I have seen."

Before she could tell more, she came to the street to leave the car.

As she stepped out of the car, a plain-looking business man remarked, "What a luxury to hear a farmer's wife talk enthusiastically about her farm life. She enjoys their business, and is evidently business partner in that Western farm-home."

"I was just thinking," remarked a woman near by, "that I would like to see that woman's husband, that doubtless he is a man who likes his business. You know there are very few men who seem to feel that their business is at all congenial, and I think that is why women are restless and dissatisfied. Do you know of many men who will say they are pleased with the business or profession they have chosen?"

"No, I must say I do not."

Still another person spoke, who was interested in the conversation. "I would like to tell you an experience I had a few nights ago. Two young men met at our house by chance, who had been friends at school the year before. Sam had graduated in mechanical engineering, and was in Buffalo partly to see the Fair for a day or two, but more to look for work. He was long-faced and discouraged, and said, 'I guess I have made a mistake in choosing mechanical engineering. There seems no place for me. Every one with whom I have talked during the past summer disliked his business.. I don't see how one is to know what to do."

The other young man, named Harry, joined with, 'I'm as badly off. I have been doing newspaper-reporting this summer, planning to go to law school this fall. I was at work in the press-tent, while the President lay dying in the famed Milburn house. There in the tent I met some of the most noted newspaper-men of the whole country—men who receive thousands of dollars salary—yet when I talked with them, they said, "you are young and can choose; newspaper-work is a slave's life; don't do it." Now it is time to decide about law, and to-day I have talked with three good lawyers; they each said, "don't do it!"' Just then a third young man came in our home, for he was part of the family, and was himself a mechanical engineer.

"'How goes it Sam?' he said, as he offered to shake hands.

"'Pretty bad,' was Sam's answer.

"'What's the matter?'

"Then Sam told his story over.

"'Oh, that's nonsense; you don't want to listen to any such talk; there's lots of work. I'll tell you where to apply. To-morrow night you will probably have two or three places from which to choose.'

"'Are you sorry you studied the profession?' asked Sam.

"'No, certainly not; I love my work.'

"'Can you help me out as you have Sam?' asked Harry.

"'Law is out of my line, but if I had wanted to study it as long as you have I should go ahead. I guess you'll always get work, judging by your past.'

"'I guess you must beloug to the National Sunshine Society,' said Sam.

"'Whether I do or not, you had better join it, and not carry around a long face as you had when I came in.'

"The next night snre enough Sam was asking advice to help decide between three places."

The long car-ride ended, and so the discussion, but the philosopher of the party added: "Which all goes to show that the songs of life are in many keys."

Mary Joslyn Smith.

The Problem of the Boy

Begin the problem with firmness, add love multiplied by truth, and divide it equally with all the children. Use them all alike and give them the very best education that your meaus will permit. Utilize all of your resources for their development physically, and provide wisely for their mental enjoyment. Good, pure books are cheap, so give them plenty of them. Keep all sensational literature out of the home. Teach them to love and develop a taste for high-class literature, and as a return you will find it a most profitable and enjoyable investment.

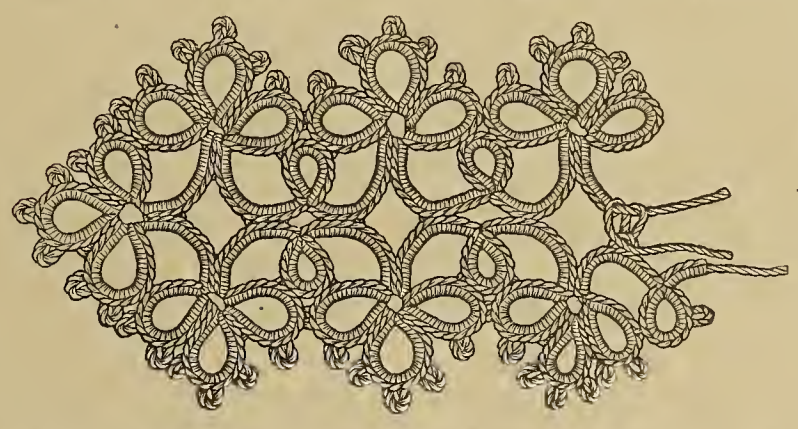
If you do all this you will have the satisfaction of seeing your children grow up with a love for home, having no desire to spend their evenings on the street or in some place of debauchery. Parents in this age of advancement who do not give their children a fairly good education are not doing their duty. We should utilize our best efforts for their enjoyment, happiness and advancement, remembering that we brought nothing with us into the world, and it is certain that we can take nothing out. If we leave a legacy for our children, let it be an education that will be of such a useful character that no matter what difficulties in life may fall in their pathway they may be able to overcome them.

Leave them, also, an honorable name, and a self-reliant spirit that can say "No" and mean "No" when they know a thing is wrong. The seriousness of the crime that has lately been perpetrated on our nation, and its effects on our national morals, must not be overlooked. Our cities, like many foreign cities, are becoming too much crowded together. Too many foreigners of the uneducated class are crowded together, and our own civilization will soon be as corrupt as that of foreign lands. The recent crime helps bear out this statement. Our educational laws, too, are not as strictly enforced as they should be. It is education that lifts men above crime. Look at our worst criminals and at the records at our penitentiaries and you will find but few who are able to read or write. As a result of ignorance our land is covered with the idleness, misery and crime that fills our jails, asylums and almshouses.

This is the class of people that cause our troubles and our riots and furnish victims for the scaffold. "To teach is to inaugurate a revolution; to build up and educate is to build a fort, and to furnish a library you have an arsenal." To educate is to open the avenues of thought. Pure thought is the intellectual value of the soul—the only guide, and without which the brain is weak and cannot withstand temptation. Therefore we must educate. This is my plea and my prayer for the good of the nation. Mrs. S. W. Burlingame.

A Tatting Barb

This can be made to wear over a black velvet stock, and is pretty made of



tightly twisted silk thread in white. The points should just meet in front, and be confined with a small brooch.

A Happy Family

In the fall a year ago I had several plants that I could not be reconciled to lose by frost, and yet I had not enough window-room to accommodate them all in separate pots, so I decided to make an experiment. I cut slips and rooted them in small pots. When they were well started I took an old cracked pudding-pot about nine inches in diameter and five inches deep. This I nearly filled with my own particular flower-pot mixture and then set the potted slips in it.

Now, the remarkable part of it was that although it was crowded on the plant-shelf and did not have its rightful share of sunshine, every one of the cuttings thrived amazingly. Let me describe this "happy family" as it looked the last day of February.

The three tallest plants were a rose-geranium, a "happy thought" geranium, with unusually large leaves like white and green velvet, and a glossy wax-begonia; then there were a dark coleus, which is a handsome red in the sunshine, and a spotted-leaved begonia; intermixed with these different leaves were several striped Tradescantias, while the green kind hung over the edge of the pot.

This pot of foliage—and the wax-begonia had bloomed—was drawn upon freely for bouquets. The "happy thought" and rose-geraniums were especially nice, as on account of the shade the leaves had very long stems. I took slips from these plants and set them out in the summer garden.

People marveled at the thritfy appearance of my plants. I attributed it to three things—judicious watering, frequent showering and, most important of all, good potting-soil. Here is my formula for the latter.

Put two quarts of good rich garden-mold and two quarts of leaf-mold or stump-dirt sifted together through a coarse sieve, one heaping tablespoonful of bone-flour and two tablespoonfuls of hard-wood ashes. Mix thoroughly.

Bone-flour can be bought of seedsmen. More of it, with the ashes, may be used through the winter, scratched in on the surface. It is a safe fertilizer, and with me it has never failed to make heliotropes blossom.

Susan Brown Robbins.

With the Illustrators

No. 2

"My work," said artist No. 2, "runs largely to illustrating stories and designing magazine-covers. You have already seen some of my advertising with my friends' productions. I will show you what I have done in other departments of our work."

A well-known juvenile magazine attracted my notice first.

"This cover," said he, "I vary in design from month to month. It keeps certain general features, border and lettering, but each month I make a new cover illustration. This scene," pointing to a spirited boating and hunting excursion, "is purely imaginative, though of course I have made the details true to life as I have seen them."

He picked up another well-known periodical, turned through its pages and called my attention to the decorative designs at the headings of departments. "There is something you would hardly think to class with an artist's work, but some of these designs cost much time and trouble. They must be suggestive without being pedantic. It is difficult to suit one's self and at the same time satisfy the one who buys the picture. That is one of the hardships of our profession until one has reached a degree of fame and reputation that enables him to choose his own work and to refuse to give anything poor to the public. We, like others of the world's workers, must often struggle along at work that is distasteful—cheap advertising, for instance—until we gain means to be independent of employers. Here is something," pointing to a fanciful sketch in the same periodical, "that I changed a number of times to meet the approval of the periodical. I am quite conscious that it is not as good as it was at first, but in a matter of minor importance I am willing to yield a point. Our artist consciences permit us to sacrifice detail, but not principle."

With great courtesy and patience the artist pointed out certain difficulties in his work. For instance, it is not always easy to illustrate a story that another has written. The idea expressed in words and the idea expressed in drawing may not coincide. The artist must be able to put himself into the story and make every line of his picture mean something. Added to this must be accurate knowledge of the technique necessary for reproduction. Given an original talent as basis the artist must add thereto the genius for hard work.

When I had examined many of the artist's drawings he said, "You have a fair idea of what my daily work means, now I want you to see the photographs I took a few weeks ago when I ran off for a few days of country air."

The collection included the old homestead with the reunited family, familiar home scenes, the village store, domestic animals, the old mill, and even a snapshot of a typical country fire, flames bursting from the old frame house and the usual crowd gathered as workers or witnesses. These pictures, he told me, would be of value to him for a suggestion here and there in his own compositions. There were nearly a hundred pictures in the collection, and one could readily see that the charm of boyhood association invested the whole. More and more of the artist's early days on the farm are pretty sure to crop out in his pictures.

An artist's studio is a sort of fairyland in the mind of the uninitiated. It is a wholesome bit of experience to go behind the scenes and learn something of the long hours, the patience and the genius for taking infinite pains that is part of the daily life of a professional illustrator. For all that their work is not drudgery. No work into which one puts heart and feeling and self-need degenerates into that. These men, counted among the best in their own line of illustrating, impress one as being honest workers, humble with the humility that is a part of large-minded men everywhere, doing with pen and brush much that makes the world the better for their being in it. We of the laity admit, somewhat to our surprise, that the illustrator is not a man or woman of big pay and little work, but one who ranks high among the world's workers for the amount of time, thought and old-fashioned "digging" that he gives to his profession. In this, as in all other professions, it is the character back of the work that counts. Not every one is fitted to be an illustrator, but granted every natural endowment it yet remains to be the man or woman back of it and put conscience into every stroke.

Bertha Knowlton.

Hints for Housewives

I recently saw such a novel floor-covering in a California home that I will tell how it was made, so others may make it if they so desire. The covering was tea-matting that comes around tea-boxes, and can be obtained at any store, I think. Each piece was tacked so the edges joined, as other matting would, only the pieces were not of uniform size and had to be fitted in with the greatest care. The floor was first well covered with papers to keep out the cold and also help the matting stand more wear. It saved a great deal of scrubbing, and was much nicer than a bare floor.

Rag rugs are splendid for kitchen floors. Knitted ones are easily and cheaply made by sewing rags together, as for rag carpet and knitting on two large wooden needles. Cast on about sixteen stitches and knit as any plain garter-stitch. Then sew strips together any desired width. They are soft to stand upon.

Paper bags come so handy so often, and yet how often impossible it is to find one when most wanted. Drive three nails about eight inches apart, in a row, a convenient height from the floor, and file the heads off, so the bags will easily slip on and off. When you empty a bag put it on one of these nails, keeping different sizes on different nails, and when one is wanted you know right where to find it, even in the dark. Mrs. L.

Egg Sandwiches

When preparing eggs for sandwiches they should be boiled for twenty minutes. Then, instead of chopping, it is much nicer to press them through a colander, or, better still, through one of the very convenient little hand vegetable-presses. This makes the egg so fine and mealy that it is more digestible than if chopped. It is better not to cool the eggs, as then the butter which is added will melt. S. B. R.

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If afflicted with weak eyes, use **Thompson's Eye Water**

Content

I am content, dear heart, if I may sleep,
Holding thy tiny baby-fingers close,
And on the dainty pillow next my own
Thy small face, like unto a sweet, white rose—
I am content, dear heart.

I am content, sweet soul, if I may wake
To find thy blue eyes looking into mine.
I kiss thy lips full oft, and yet again,
And 'bout thy fragile form my glad arms twine,
And am content, sweet soul.

Dear God, thou givest me such bounden wealth,
I live the sweet day long in joy complete,
And when at night I go to sleep and rest
I pray thee spare to me my little sweet,
Thou God, who gavest me.

—Leila Bosworth Wilson.

Baby's Mittens

THE material required are one skein of Saxony wool or crochet-silk and a fine bone crochet-needle.

These mittens are worked in slip-stitch which is made in the following manner: Put the needle through a stitch of the foundation chain, throw the wool over and draw through both stitches at once. In the following rows take up a single thread (the inside thread or one nearest the worker) of preceding row. Widen by making two stitches in same loop, and narrow by skipping a loop.

Make a ch of 35 st and join.

First six rounds—Plain.

Seventh round—3 plain, widen, 3 plain, widen, then the rest plain.

This widening starts the thumb. Crochet four times around, and then widen again, leaving five stitches between the widening. Continue to widen every fifth row until you have widened four times, increasing two stitches between the widenings each time. Then skip all the stitches for the thumb, ch 2, and continue to work in rounds until the mitten is long enough to reach the end of the little finger. Then narrow every fifth stitch, crochet four times around, then narrow every fourth stitch, twice around, then narrow every other stitch. When there are about nine stitches left on the needle break off the wool, thread a worsted-needle, and draw the stitches all up together, fastening them very firmly; the mitten will then be round at the end.

FOR THE THUMB.—Crochet six or seven times around for the thumb, and then narrow about every third stitch until there are about four stitches on the needle; then draw together the same as for the hand.

FOR THE WRIST.—Now begin at the wrist and make a d c in every third stitch, making 1 ch between each. The next ten rounds are to be worked in slip-stitch.

Eleventh round—Make d c in first stitch, 1 s c, skip 3 st, 1 s c in fourth, skip 3, 4 doubles in next, and continue in this manner all around.

Twelfth round—2 d c in each d c of preceding row, and 1 single in each single of that row.

Thirteenth round—1 s c in each stitch of shell, with 1 ch between; when the second stitch of the second shell is reached lap it over the first shell and fasten in next to the last stitch of that shell.

Run ribbon through the d c and tie with a bow at the back. There is no right nor left to these mittens, the bow at the back determining the hand on which each is to be worn. The plan for making may be enlarged for an adult.

NAOMI MATTISON.

Meat-cakes

This is an excellent way to use up small quantities of cooked meat, beef, ham or fish that are left over: Chop the meat, and add an equal amount of cracker-crumbs pounded or rolled fine; moisten with milk, to make quite a soft mixture, then stir in an egg, and season to taste. Place spoonfuls of the mixture on a hot, well-greased griddle, and smooth them out into little cakes. They brown very nicely in a short time, and then should be turned and the other side browned.

S. B. R.

Fainting

IS IT ONLY A FASHIONABLE FEMININE ACCOMPLISHMENT?

In the novels of a generation or so back, fainting seems to be generally regarded as an accomplishment of a fashionable woman. Whenever there was an awkward situation to be covered the woman discreetly and decorously fainted. It is also insinuated that place as well as time had to be considered in the fitting exercise of this accomplishment. There must be a convenient couch to lie on, and still more there must be a pair of manly arms to support the limp burden as it swayed and slipped to the ground. Women did not as a rule exhibit this accomplishment for the benefit of their own sex, but only when some observant male was at hand to see and succor.

The heroines of the modern novelist are not given to fainting. The "accomplishment" seems to have gone out with the working of samplers. Weakness was once a woman's weapon. Now she despises weakness and all its symptoms. It may be taken for granted, therefore, that nowadays if a woman faints it is because of genuine weakness that she cannot conceal. Instead of wanting male observation she avoids it and despises herself for her own frailty.

WHY WOMEN FAINT

In general women who faint are more liable to do so at some special periods than at others, and the liability to faint is generally increased with the recurrences of the periodic womanly function. From this fact alone it might be fairly argued that there is a close relation between local womanly weakness and the physical weakness which causes women to faint. Womanly ailments surely undermine the general health. Irregularity, suppression, profusion, unhealthy drains, inflammation, ulceration, and female weakness, are the diseases which drain the vitality and weaken the general health of women and render them liable among other things to "fainting spells." Cure the local womanly diseases and there is at once a gain in the general health.

"It gives me great pleasure," writes Miss Ella Sapp, of Jamestown, Guilford Co., N. C., "to thank Dr. Pierce for the great good received from the use of his 'Favorite Prescription' and 'Golden Medical Discovery.' I had suffered for three years or more at monthly periods. It seemed as though I would die with pains in my back and stomach. I could not rise to my feet at all without fainting; had given up all hope of ever being cured, when one of my friends insisted upon my trying Dr. Pierce's Favorite Prescription. With but little faith I tried it, and before I had taken half a bottle I felt better, had better appetite and slept better. Now I have taken two bottles of 'Favorite Prescription' and one of 'Golden Medical Discovery,' and am happy to say I am entirely cured, and all done in two months' time, when all other medicines had failed to do any good at all."

WEAK WOMEN MADE STRONG

Dr. Pierce's Favorite Prescription makes weak women strong and sick women well. It does not matter how great is the weakness or how chronic the sickness "Favorite Prescription" may be used with the utmost confidence and assurance that it will cure and strengthen if the disease lies within the bounds of a medicinal cure. In many a case where local physicians have said there was no aid in medicine and pointed to a hazardous operation as the only alternative to a life of suffering, the use of Dr. Pierce's Favorite Prescription has resulted in a perfect and permanent cure. It is such cures as these which have given "Favorite Prescription" pre-eminence among medicines for the cure of woman's diseases.

"I suffered for twelve years with female trouble," writes Mrs. Milton Grimes, of Adair, Adair Co., Iowa, "which brought on other diseases—heart trouble, Bright's disease, nervousness, and at times would be nearly paralyzed. Had neuralgia of stomach. I can freely say your medicines (nine bottles in all, five of 'Favorite Prescription,' four of 'Golden Medical Discovery' and two vials of Dr. Pierce's Pleasant Pellets), have cured me. I can work with comfort now, but before I would be tired all the time and have a dizzy headache, and my nerves would be all unstrung so I could not sleep. Now I can sleep and do a big day's work, something I had not done for over eleven years before.

"You have my consent to publish this testimonial, hoping it will be the means of helping some other invalid."

WOMEN ARE THE WITNESSES

It is the women who have acclaimed Dr. Pierce's Favorite Prescription as the greatest and best medicine for the cure of womanly diseases. The witnesses to its power are the women it has cured. There are hundreds of thousands of healthy women to-day who have been restored by "Favorite Prescription" to a happy, useful life after years of suffering and years of useless medical treatment. If you are suffering from any disease peculiar to women there is every motive for you to try Dr. Pierce's Favorite Prescription and every encouragement to expect a complete cure. No matter how severe the disease, the wonder will be not that "Favorite Prescription" cures you, but that it should fail to do so. Its cures are so uniform, so reliable, that if it did not cure you, you would stand alone, a wonder and a marvel, a solitary exception among hundreds of thousands of weak women who have been made strong and sick women who have been made well by the use of this great remedy.

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If you are led to the purchase of "Favorite Prescription" because of its remarkable cures of other women, do not accept a substitute which has none of these cures to its credit.

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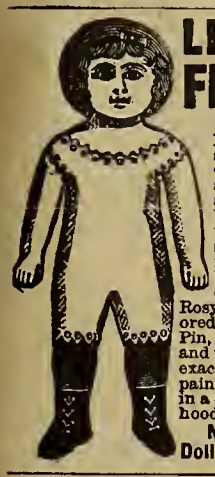

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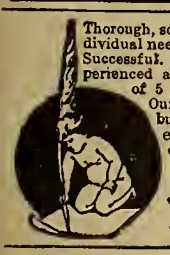

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Now rest, my heart!
Canst thou by fretting keep the day
From sleeping in the arms of night?
Or make one sunbeam longer stay,
Or bring one clouded star in sight?
Thou canst not keep life's pain away
From that soul dearer than thine own,
But thou canst trust each sorrow may
Bring blossoms where thorns might have grown.

Now rest, my heart!
Two angels wait to give thee peace.
Remembrance, with past blessings, brings
Assurance that good will not cease.
Forgetfulness has healing wings.
These will thy true companions be;
And hearts with burdens more than thine
May feel the love that shelters thee,
And seek the rest that is divine.
Then rest, my heart!
—Myra Goodwin Plantz, in "Christian Advocate."

A Religion That Makes Wrong Right

About the year 1870, says a local paper, a farmer named Gleason, living northeast of Independence, Iowa, one morning found one of his colts dead, and there was certain evidence that it had been killed by some one. The young man supposed to have killed the colt left the country about that time, and very little was heard from him for some time, when it was learned that he had been converted and had joined the church. Years afterward the young man returned to Buchanan County for a visit. While there he went to Mr. Gleason's farm, and meeting Mr. Gleason said, "I believe you lost a colt several years ago."

"I did," was the reply.

"How much was it worth?" was the next question.

"About eighty dollars."

"Will this pay for it?" said the visitor, handing out one hundred dollars.

"Yes, and more, too," said Mr. Gleason, handing back twenty dollars.

The other person took the twenty dollars and departed, starting for Nebraska that day.

That is the kind of religion that is needed, and needed by some persons who were converted a long time ago—so long ago that the strength of their religion apparently needs renewing.

The only way to correct a wrong done is to make it right, or confess it and be forgiven. Denying it does not make it right. Setting up bogus counter-claims and offsets does not make it right. Gagging a wronged man and voting to pay no attention to him does not make it right. Lying about a man and trying to crush him does not make it right. Employing crooked lawyers to outwit him does not make it right. Slandering and boycotting the men who know the facts and dare tell them does not make it right. Keeping quiet "till it blows over" does not make it right. Getting a majority to vote that it is all right does not make it right. Employing cheap partizans to abuse and misrepresent him does not make it right. Bribing those who have eaten his bread to lift up the heel against him does not make it right. Long prayers, loud talk, and reports of perfect peace and unbroken harmony do not make it right. When men have started on a wrong road the only way to get right is to turn about and retrace their steps, and cease to do evil and learn to do well, restore that which is taken away, confess the fault and be forgiven and then all will be well.
—H. L. Hastings in The Armory.

It Must Be Always Right

We cannot do right to-day and wrong to-morrow! It must be always right to-day, to-morrow and every day, for only by constant care and watchfulness can we keep our lives near the right when so many stand ready to dim our light and blight our hopes with temptation on all sides. No life can be so beautiful as to give light to others without having its brightness reflected on the giver. So, not for one reason, but for many, should our examples be of the best. If we will be faithful we shall be blessed and give joy to those about us. And thus we may look forward hopefully to the evening of life.

And the night shall be filled with music,
And the cares that infest the day
Shall fold their tents like the Arabs
And silently pass away.
—Universalist.

The Beggar Boy

"Go away from there, you beggar. You have no right to be looking at our flowers," shouted a little fellow from the garden.

A boy, who was pale, dirty and ragged, was leaning against the fence, admiring the splendid show of roses and tulips within. His face reddened with anger at the rude language, and he was about to answer defiantly, when a little girl sprang out from an arbor near, and, looking at both, said to her brother, "How could you speak so, Herbert? I'm sure his looking at the flowers doesn't hurt us." And then, to soothe the wounded feelings of the stranger, she added, "Little boy, I'll give you some flowers if you'll wait a moment," and she gathered a bouquet and handed it through the fence.

Twelve years after this occurrence the girl had grown to a woman. One bright afternoon she was walking with her husband in the garden when she observed a young man in workman's dress leaning over the fence and looking attentively at her and the flowers. Turning to her husband, she said, "It does me good to see people admiring the garden. I'll give that young man some of the flowers." And approaching him, she said, "Are you fond of flowers, sir? It will give me pleasure to gather you some."

The young workman looked a moment into her fair face, and then said, in a voice tremulous with feeling, "Twelve years ago I stood here a ragged little beggar boy, and you showed me the same kindness. The bright flowers and your pleasant words made a new boy of me—aye, and they made a man of me, too. Your face, madam, has been a light to me in my dark hours of life; and now, thank God, though that boy is still a humble, hard-working man, he is an honest and grateful one."

Tears stood in the eyes of the lady as, turning to her husband, she said, "God put it into my young heart to do that little act of kindness, and see how great a reward it has brought!"—Free Church of Scotland Monthly.

Not Mrs. Nation, But—

"I am not Mrs. Nation; I have no hatchet; I am not crazy." These words came from the lips of a Lewes woman, as she met her husband face to face in a hotel bar-room the other evening, says the Lewes Pilot. They were directed to the bartender and the loungers, as the former handed the woman's husband a glass of whiskey. She continued: "That man has not done a day's work this winter, and I am worn out trying to support him and the rest of the family. I want to know if something cannot be done to keep him from destroying his own life and starving his family." The woman was thin and pale. Her lips quivered as she spoke. Her frail body could hardly stand the strain of the unfamiliar environment. As she finished the little girl by her side burst into tears. The bartender took back the whisky. The abashed husband stood with bowed head. One by one the loungers left the room. Presently the bartender, gazing at the poor woman, solemnly vowed that the man should not drink at his bar again. It was a pathetic scene; it was the last resort of a desperate woman.

Symptoms of Self

Some of the manifestations of the self-life are: A disposition to look at everything with an eye to how it will affect ourselves. It is an instinctive, wide-awake looking out for what we call No. 1. There is a disease in the roots of some trees and vegetables called "root-knot," which causes the roots, instead of stretching themselves out in the soil, to curl themselves back into a knot, stunting the growth and preventing fruit.

The self-life is always unwittingly magnifying itself. It will talk incessantly of its doings and great achievements; it will relate incidents in its past life in such a way as to show off self to the best advantage.

A soul affected with mental root-knot is always turning back upon itself, and if it preaches, or prays, or sings, or gives money, or enters any enterprise, it has a keen faculty of seeing how the results will affect its own honor, or reward, or happiness.—Rev. G. D. Watson, in "Way of Faith."

Reward of Merit

A New Catarrh Cure Secures National Popularity in Less Than One Year

Throughout a great nation of eighty million it is a desperate struggle to secure even a recognition for a new article, to say nothing of achieving popular favor, and yet within one year Stuart's

Catarrh Tablets, the new catarrh cure, has met with snch success that to-day it can be found in every drug-store throughout the United States and Canada.

To be sure, a large amount of advertising was necessary in the first instance to bring the remedy to the attention of the public, but everyone familiar with the subject knows that advertising alone never made any article permanently successful. It must have in addition absolute, undeniable merit, and this the new catarrh cure certainly possesses in a marked degree.

Physicians, who formerly depended upon inhalers, sprays and local washes or ointments, now use Stuart's Catarrh Tablets, because, as one of the most prominent stated, these tablets contain in pleasant, convenient form all the really efficient catarrh remedies, such as red-gum, bloodroot and similar antiseptics.

They contain no cocaine nor opiate, and are given little children with entire safety and benefit.

Dr. J. J. Reitiger, of Covingtou, Ky., says: "I suffered from catarrh in my head and throat every fall, with stoppage of the nose and irritation in the throat affecting my voice and often extending to the stomach, causing catarrh of the stomach. I bought a fifty-cent package of Stuart's Catarrh Tablets at my druggist's, carried them in my pocket and used them faithfully, and the way in which they cleared my head and throat was certainly remarkable. I had no catarrh last winter and spring and consider myself entirely free from any catarrhal trouble."

Mrs. Jerome Ellison, of Wheeling, W. Va., writes: "I suffered from catarrh nearly my whole life and last winter my two children also suffered from catarrhal colds and sore throat so much they were out of school a large portion of the winter. My brother, who was cured of catarrhal deafness by using Stuart's Catarrh Tablets, urged me to try them so much that I did so and am truly thankful for what they have done for myself and my children. I always keep a box of the tablets in the house and at the first appearance of a cold or sore throat we nip it in the bud and catarrh is no longer a household affliction with us."

Full-sized packages of Stuart's Catarrh Tablets are sold for fifty cents at all druggists.

Send for book on cause and cure of catarrh; mailed free. Address F. A. Stuart Co., Marshall, Michigan.

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A MAN IS A MAN FOR ALL THAT

BY FRANK H. SWEET

Two men stood on a spur of the Blue Ridge gazing down into the great Virginia Valley, which stretched away almost to the limit of their vision. Both were young and strong. Both had broad shoulders and clear, unwavering eyes. Each had the quiet decisiveness of manner which characterizes men who have met obstacles and removed them. Even their voices had a ring in common. They had the same trick of standing upon the ball of the right foot when throwiug a rifle into position for a liue shot. Onc of them was in that position now. His eye gazed along the barrel and across space to an almost invisible dot on the mountain-side. A sharp report rang out and then the barrel was lowered. The bullet evidently sped unerringly upon the course marked out by the practised eye for the dot disappeared.

"You hit it, Jake," said the other man, with undisguised surprise in his voice.

"Yes, I reckon so," was the matter-of-fact answer. "I generally do, that fur."

He threw open the barrel and extracted the empty shell, replaced it with a loaded one and waited expectantly, the rifle resting in the hollow of his arm. His companion still lingered for another look into the valley.

"It is a grand sight, Jake," he said, turning away reluctantly. "I do not wonder you like to live up here better than down in the valley."

"I 'low on movin' down thar next month," Jake answered. "A man can't get ahead up here. But s'pose we light out fur the deer, Mr. Lane. We'll glimpse the valley ag'in from the next spur."

As they went down the slope the remarkable resemblance between the two men could be seen to extend even to their mode of walking. Both carried their heads high and their shoulders well back, and both had the alert composure which defies surprise and ignores fear. And yet their points of difference were equally striking. Jake's complexion was burned to swarthiness by exposure, while his companion's was soft and white as a girl's. Jake's clothing was loose and ill-fitting, and he walked with a long, slouching swing peculiar to mountaineers unfamiliar with level ground. Lane, on the other hand, was clad in expensive, well-made garments, and he walked with the firm, regular step which a West Pointer never forgets.

It was slow work descending the slope and climbing over boulders to the opposite spur, but on the way Jake added two more pheasants to his bag, taking the difficult shots and leaving the easy ones for his companion.

"Don't be in too much hurry," he advised, as Lane's third bullet flew wide of its mark, "shootin' has to be learned by practice, jest like all other work. Get your range true, an' hold your gun steady, an' if the game won't wait that long, why, jest hold on fur another chance. Thar's too much empty space lyin' round fur careless balls to be wasted in."

"I'm afraid I shall never be a successful hunter," returned Lane, good-naturedly. "Three birds taken and six lost where all the shots were good isn't much of a showing."

"Folks shouldn't 'low to do everything. You've been playin' with a rifle two days an' I've been workin' with it all my life. It's all I know, but you've got books an' music an' paintin', an'—an' a hundred things I never heered on. Last night you was tellin' me 'bout studyin' soldierin' in a big school, an' ridin' a thousand miles on the steam-cars—I rid twenty miles in 'em once—an' the yachts au' the ocean, but I ain't even an idee how they look. But here we air," more cheerfully, "an' thar's the deer under the bushes over thar. Now look down in the valley an' see,'t ain't jest as purty as back from t'other knob."

Lane advanced to the extreme point of the spur and gazed down. The scene was much the same that he had seen an hour before, but with some of the wildness of the forest softened into cultivated farms and peaceful villages. Just below was a pretty vine-covered cottage, with broad verandas, in the midst of thrifty orchards and fields.

"That's whar I'm goin' to take you from here," said Jake, following the direction of his gaze. "Hit's a mighty nice family in that house. Moved from my part o' the mountain a year come Christmas. Old man struck a manganese vein an' sold out fur two thousand an' bought that place. Now he's doin' right well, an' I have heered he's goin' to send some o' his children to boardin'-school."

There was something in his voice that made Lane look at him more closely.

"Particular friends of yours?" he asked.

"Yes," Jake answered, calmly. "I used to go to school with Meta when I wa'n't sca'sely bigger than a chippin'-sparrer, an' since they've moved here I've got in the way of totin' down part o' my game. They're busy now, an' ain't no time fur huntin'. Half the deer an' one pheasant is plenty fur us an' I 'lowed on takin' them the rest."

"Of course," agreed Lane, readily. "We only want what we can use."

As they descended from the spur they began to hear the clanging of dinner-bells from various parts of the valley. Lane thought they were school or factory bells until Jake began to point them out, one after another, generally suspended from the tops of a smoke-house or some small building convenient to the kitchen from which the cook could run out and give the dangling rope a few spasmodic jerks when it was time to call the men in from the field. But the bell of the vine-covered cottage did not ring until they were across its fields and half way through the encompassing fruit-trees. Then Jake looked at Laue and nodded.

"Seen us comin' an' held off a while," he said.

And evidently he was right, for when they emerged from the orchard there was the host, waiting upon the veranda with a broad smile of welcome on his face, and with him was a handsome, middle-aged woman and a girl whom Lane's appreciative eyes pronounced one of the most attractive he had ever seen. She was not more than seventeen or eighteen, with a brown, healthy complexion and deep, magnetic, mischievous eyes. He was wondering at them even before he clasped her extended hand.

"Come right in to dinner," he heard the host exclaim cordially. "We seen you-all comin' down the mountain, an' so had another pa'r o' chickens kilt." And he heard the gentler, but no less emphatic, welcome of the woman aud saw the same hospitality in the wonderful eyes of the girl.

She was now talking with Jake and laughing softly at something he was telling her. Lane wondered what it was that could bring such delicate color to her cheeks and such tenderness to her eyes. Then he remembered what Jake had said about Meta and felt resentful and then grew angry with himself for being a fool. Of course there was nothing in it. They had grown up as children together and were very good friends—that was all. The host at that moment marched into the dining-room and they all followed, single file, with several small children bringing up the rear.

Lane was puzzled with himself. He was angry and amazed. He had never been in love and did not intend to go a-wooing for years to come. And when he did go he was going about it in a sensible, gentlemanly way. Yet here he was thinking of this girl as "Meta," and he had not knowu her half an hour, nor spoken with her half a dozen words. He had held her hand a moment and had looked into her eyes—that was about all. Aud for aught he knew this stalwart prototype of himself, whom he had never heard of a week ago, was already in possession of her heart. Bah! Of one thing he was certain—he was a self-made fool, a sentimental cad. Men did not hurl themselves into love as they would explode a dynamite-cartridge. No, indeed! It was just because he was out of fix. He had been eating something which had disturbed his nerves. He finally decided he was not a fool—quite, and to prove it he turned to the girl, whom he already mentally called Meta, and began to talk the conventional commonplace of his own world, but a few questions from her and a comment or two from the host and Jake caused him to launch out on a vivid description of his travels and his life at West Point, of the hurry and concentration of city dwellers, of those who knew not the existence of next-door neighbors.

He was a good talker and this time surpassed himself. He was conscious of it, and the consciousness spurred him to more brilliant efforts. Jake had dropped his knife and fork and was regarding him intently, absorbing every word; the host looked by turns interested and iucredulous; the hostess nodded her head from time to time, but was more iutent on supplying her guests with food than in listeuing to their conversation.

But he was not talking to them. Meta was leauing forward with parted lips. When he spoke of the opera, the great department stores, the brilliant summer shore-resorts and the city's winter fashions her eyes glowed and a new color flowed into her cheeks. Once or twice he touched on the great libraries, on the arts and sciences, and was a little depressed at her sudden loss of interest, but her cheeks were still fair, her lips tender and sensitive and in her eyes was that inexpressible something which made him forgive or forget all else.

"It's beautiful," she murmured; "I 'low one could live thar an' never get tired."

"An' I 'low I'd get mightily tired arter I'd done seen hit once," said her father, emphatically. "This valley's good enough for we-all. I wouldn't mind the travel so much, but the fashions an' follols—Lord deliver me!"

"'Taint so much the likiu'," Jake observed, gravely. "It's the knowin' of things. We ain't put here jest fur fun, but to make use of the best that's in us, an' to do that we must know how big the world is an' what's bein' done. Now, Mr. Lane here an' me started 'bout the same—good, healthy, go-ahead babies—only he was steered through schools an' all them places that give knowledge an' I was left to stagnate behind these mountain-spurs that shet out everything but the sky an' sun. Not but what I like the mountains best," quickly, "but, as I was sayin', 'tain't our likin' so much as 't is our use."

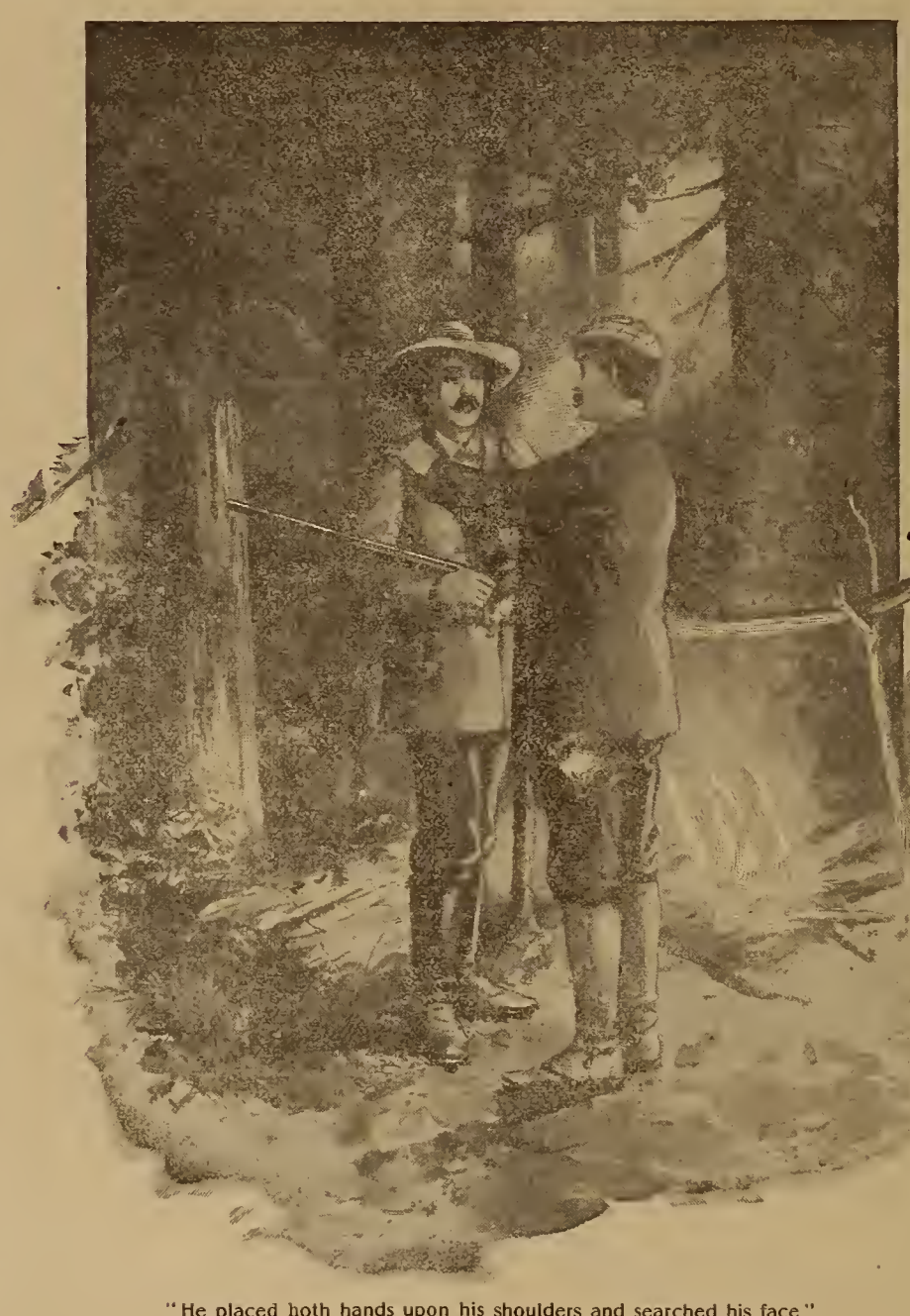
"Kuowledge is not always use," objected Mr. Lane. "A man does not change his spots any more than a leopard. Knowledge merely accentuates him."

"An' broadens him," insisted Jake. "It brings the whole world under his thumh instead of jest his garden-patch. As I was sayin', yon an' me are good p'ints. We have idees in common, but our use of 'em would he as wide apart as a taller candle an' one o' your 'lectric lights."

"By the way," broke in their host, addressing Mr. Lane, curiously, "are you any kin to Jake? You cert'ny favor each other mightily."

Mr. Lane looked at Jake and laughed.

"People seem hound to establish some relationship between us, eh, Jake?" he said. Then, turning to their host, he said, "No, we never heard of each other nntil a few days ago. I came here for a week or two of fresh air, and the postmaster spoke of Jake as being the best guide I could find. It is curious about the resemblance we bear to each other. People are constantly reminding us of it."



"He placed hoth hands upon his shoulders and searched his face"

It had been their intention to spend the afternoon hunting, but instead they went out on the veranda aud remained until it was supper-time and then ate supper and went back and talked until long after the whippoorwills had begun to call to each other across the fields.

Nor did it end there. Jake had been a frequent visitor and now Mr. Lane became a frequent visitor, too. For a time he wondered if there was anything between Meta and his guide, but finally decided there was not. Jake always left them together on the veranda and went off and talked with the host or with some of the hands about the farm. Very soon Mr. Lane came to regard this as the agreeable and proper thing for him to do.

The weeks had only seemed to strengthen his—I will not say infatuation, for it had grown into something deeper and more permanent than that. During the first few days he had wavered and tried to force his reason to control his impulse. He had told himself the girl was not suited to him, to his position, his ambition, his family. She was sweet and beautiful and womanly, but she was ignorant and possessed no knowledge or desire for books. Whatever else she might be, her tastes and aspirations were in a measure formed. She had grown up unconscious of the things which were integral parts of his life and now it was too late for her to go back and gather up the scattered threads she had missed.

But, after all, what was argument or reason in a case like this? The girl was beautiful, she was sweet and womanly and when he looked into her eyes there was no future or past or world around. Two weeks passed and he knew and acknowledged that he was in love. Another week served to convince him that he was ready to undertake anything and to sacrifice anything to win her. That was the way he felt one evening as he sat by their camp-fire, gazing dreamily at the flames which circled and flared about the blackening logs. Jake, also silent, sat on the other side and reflectively regarded the fire and the gliding shadows it cast upon the bole of a giant oak near them. They had just returned from the vine-covered cottage. At length Mr. Lane spoke.

"I thought at first, Jake," he said, with a side glance at his guide, "that there might be something between you and Meta."

Jake turned his face so that it was in the shadow.

"Thar was," he answered. "I let her off this arternoon."

"What?"

"We've been engaged four years—ever since she was fourteen an' me twenty," Jake went on, stolidly.

Mr. Lane sprang to his feet, then sat down and gazed helplessly at his companion.

"But why—why did you uot tell me?" he demanded.

"Thar wa'n't no reason," Jake said, calmly. "At first I left you with her because I knew't would be pleasanter an' you was my guest. Then, arter I see how things was goin', I kept off because I—well, I'd done engaged Meta when she was hut fourteen an' when she hadn't sca'sely seen any man but me an' likely didn't know hers'f. You was fine appearin' an' had ways that girls like. I—I wanted Meta to have a fa'r chance. If she liked you better'n me it would 'a' been all right an' showed I'd been wrong frum the fust." He raised his head proudly. "If I had my way," he said, slowly, "an' thar was a woman I loved, I'd bring the best man in the world an' give him a fa'r chance to win her. I wouldn't car' to have a girl an' think mebbe thar was a man somewhar' in the world she could love better'n me. 'Twouldn't be fa'r to either of us."

Still Mr. Lane did not speak. He was looking at Jake, helpless even to frame an answer to what so vitally concerned himself.

"Things bein' as they air," Jake went on, after a long pause, "an' the month bein' up that we agreed on, I reckon I'll be leavin' you to-morrer, Mr. Lane. Thar's Tobe Rob'son, up the mountain, knows as much as me, an' he'll be glad for a job of guidin'."

"But why—" Mr. Lane began, and then stopped.

"I feel to be gettin' off a spell," Jake said, gravely. "I've staid here in the mountains too long. Mebbe thar's some work waitin' for me somewhar an' it's fur me to find. Anyway, if I don't begin travelin' purty soon 'tain't likely I ever will."

There was something in the resolutely strong voice that brought Mr. Lane to his feet and carried him to the other side of the fire.

"You will do nothing of the kind, Jake," he said, sharply. "I'm the interloper who's broken up your Eden. I will leave in the morning or to-night and never come back."

Jake looked at him steadily.

"What good'll that do," he asked, "if Meta loves you better'n me?"

Mr. Lane started. In spite of his concern for Jake a quick glow came to his face. If Meta loved him! He returned to the log and his contemplation of the fire.

"What makes you think she loves—me, Jake?" he asked, hesitatingly.

"I ain't sayin' she does," dryly, "only when I offered to break the engagement she just raised her head an' nodded like she was sort o' relieved. She didn't speak, but the signs were strong enough for me to go out West on."

He stared at the fire a moment, then rose to his feet.

"What's the use o' you an' me talkin', Mr. Lane?" he said, wearily. "If she loves you better'n me it's all right; I don't want her. If she loved me best," a sudden ring of paiu in his voice, "you an' all the world couldn't get her from me—no, nor Death hisself if I could find a way to fight him! Now, let's turn in."

The next morning he was up and had breakfast ready almost before it was light enough to discern

the tree-boles. After it was eaten and he had put the camp in order he made his own simple preparations for departure. Mr. Lane watched him, mechanically.

"I'm awfully sorry, Jake," he said, as the guide came toward him with hand extended. "I wish you could see some other way. I can understand what leaving the mountains means to you. At least, then," noting the resolution in the other's face, "you will keep me informed of your whereabouts. And that makes me think," quickly, "you haven't yet told me your name. I have only heard you spoken of as Jake and have been calling you that."

"I'm mostly knowu as Jake Morris," replied the guide. "My last name is the same as yours—Lane. I'm Jackson Morris Lane, by rights, but I don't like the last—it makes me think of my father. You see it's this way," in answer to a startled look of inquiry, which flashed to his companion's face, "my father was Jackson Lane, an artist man from the North, who came down here an' married my mother, who was only a beautiful, ignorant mountain girl. When I was six years old he desarted us." A sudden bitterness came into his voice, of which he was doubtless unconscious, but which made the startled look on his companion's face grow more intense. "Mother never doubted him, but used to sit thar by the winder watchin' for his comin', month arter month an' year arter year, her eyes jest as lovin an' hopeful as ever. An' I'd sit thar watchin' mother, tryin' to think o' ways to make her life more easy. That's why I didn't leave the mountains. She couldn't ba'r the idee. Last year she died." He hesitated for a moment, then went on, harshly, "Do you wonder that I like my mother's name o' Morris better'n I do my father's o' Lane? Wa'n't but six when he went away, an' I remember him as a tall, han'some man with soft eyes an' brown ha'r. No wonder mother believed him. Seems queer sech a man could be a—a scoundrel."

"How long ago was it, Jake—since your father left, I mean?" Mr. Lane asked, eagerly.

"Eighteen year. I was six an' now I'm twenty-four."

Mr. Lane looked at him strangely. A curious twinkle came to his eyes.

"No wonder you and I resemble each other, Jake," he said. "We are cousins." He placed both hands upon his companion's shoulders and searched his face. "You have been laboring under a long and terrible mistake," he continued. "I am glad to tell you there never was a better, nobler man in the world than my uncle, Jackson Lane. Wait till I tell you," as the other was about to speak. "You see, my uncle was in the habit of going away on long, solitary journeys to various parts of the world in search of materials for his pictures. It was that way when he was down here among the mountains. My father and mother have told me about it. They did not hear of him for years, then one day he was brought home unconscious. It seems he was going a long way through the woods to a railroad station—perhaps to send off a telegram or to order goods—and his horse became frightened and threw him among some rocks. He was picked up and carried to a city hospital, and was recognized there and brought home. He lived only a month, and only spoke two or three times about a little Jackson and somebody he called Molly."

"My mother," said Jake, softly.

"Yes, I understand now, but it was strange to father and mother. They thought he was raving."

Jake was gazing out into the woods, back into the past, his face full of regretful tenderness.

"I wish mother'd heered," he murmured, more to himself than his companion. "But no," he said, quickly. "She always did know. She never for a moment thought of him as anything but good and noble. But I'm glad to know."

Presently he turned abruptly and threw his rifle in the hollow of his arm.

"I must be goin' now," he said. "I'm glad to have met you, Mr. Lane, an'—an'—to have found this out. I've been hatin' the name o' Lane an' that was why I was glad to act as your guide. I always mistrust myself when I'm sot an' I wanted to give the name a fa'r chance. I'm mighty glad I was mistook. Now, good-by."

"But look here," cried Mr. Lane, half laughing, half angry, as he grasped Jake by the shoulders and forced him back to the log. "You can't go. I haven't told you half yet. It is you who are the rich Mr. Lane now, not me. All the money belonged to Uncle Jackson. My father was only a poor professor in a struggling college. I'm awfully sorry, old fellow," smiling at him frankly, "you had to stagnate up here while your money was steering me through the schools and other places, but it's your turn at it now and I'm glad to say my father has been a good custodian. The half million your father left has more than doubled under his charge."

"Half a million—doubled!" said Jake, thoughtfully. "That's a good many thousand, Mr. Lane."

"Oh, say Fred, 'Mr. Lane' is too formal. Yes, it is a good many thousands—quite a number of hundred thousands."

"I used to think—Fred," a curious wonder in the deep, uncultivated voice, "that if ever I was rich—awful rich—with forty or fifty thousand, I'd start sawmills an' manganese-mines an' places to use tan-bark, so I could give work to all the pore people. Thar's lots of 'em in the mountains. These folks air strong an' willin' to work, but can't get none. I believe I could make hit pay, but if hit didn't an' I only jest got my money back 'twould be a help to the mountain people."

"Well, you'll have a chance to try the experiment now. You can put half your money in it, and then invest the rest of your fortune in something safe that will secure you against possible disaster."

But Jake shook his head.

"I don't reckon I'm in the notion any more. I'll go out West an' look round a spell, an' then mebbe I'll travel furder. An' as fur the money," indifferently, "I don't care for that. I ain't been brung up to need much. You an' Meta'll have more use fur it than me."

"But I can't use it, Jake," expostulated Mr. Lane. "It isn't mine. You know what you would do in my case. And you don't understand my father. The first thing he will do after hearing this will be to put the property into a lawyer's hands for you and it will stay there and accumulate until you condescend to accept it. No, no, Jake; the money is yours, and you must use it. We will start for the North to-day. I want you to see my father and mother."

"Before you see Meta?"

"Before anything. This duty comes first now."

"But the money would mean right much to Meta an' her fambly."

"Jake!" The voice had a ring in it which caused the two men to look squarely into each other's eyes. Then they clasped hands. "You remember what you said about not caring for a woman who could love any one better than you. I honestly prefer to seek Meta as a poor man than as a rich man. Now help me to get ready to start."

Jake leaned his rifle against a tree.

"I'll be mighty glad to see your folks, Fred," he said. "Your side o' the fambly's all the kin I have now. An' we'll fix 'bout the money up thar."

But his eyes had a peculiar twinkle as he moved about the camp. The twinkle remained during their ride down the slope to the station and while they were being whirled over the mountains and out across the red-clay lands of the Virginia plantations and on and on until Jake began to think the city of their destination would never appear.

But it did, finally. He was taken to a home the like of which he had never dreamed and to people that made his heart beat warmly merely to know they were of his kin. And then, one day, they went to the family lawyer, and there were papers drawn and signed and transferred. When the business was apparently concluded Jake went into a private office alone with the lawyer and came out with a paper which he gave to his uncle.

"Thar, I b'lieve that settles the whole business," he said, with a sigh of relief. "Havin' money don't make life as easy as I 'lowed on."

"But what is this?" asked his uncle.

"Jest a paper settlin' things up like your son 'lowed was right. He said you all couldn't use my money jest because it was mine, so, bein' o' his blood, I can't use any money that ain't mine. I've kept what my father left me—half a million—an' what he didn't leave me I've put back whar it belongs."

"But we cannot—"

"Oh, yes, you can! Hit's yours by rights. I only wish you had part o' mine. Half a million! Seems like I've got the whole gov'nment restin' on my shoulders."

The next day Mr. Lane was ready to return. He sought Jake on the veranda.

"I suppose you will stay here awhile?" he said. "I shall be back Saturday or Monday."

"Yes, a while," Jake answered. "I've been changin' my plans some." There was a new light in his eyes, a stronger purpose in his whole bearing. "I've been talkin' with your mother, Fred, an' she's been advisin' me 'bout a few things. She—she talks like my own mother might."

"Mother is a grand woman," said Mr. Lane, warmly.

But his hand was on the door-knob. Jake understood his impatience. A grayness drove some of the new light from his face, leaving only the harsher lines of strength and determination.

"I'll stay here a while," he repeated, stolidly. "I want to get used to a few things. Your mother's goin' to show me 'round some."

Fred had the door open now. Jake rose suddenly.

"I—wish you good luck," he said, huskily.

Twenty-four hours later he received a telegram. It was brief and read as follows:

"Another big mistake, Jake. It is you, not I. This afternoon I start for Florida on a short trip.

"FRED."

Jake found his aunt in the drawing-room, where she was entertaining callers; but he could not wait for her to be at leisure.

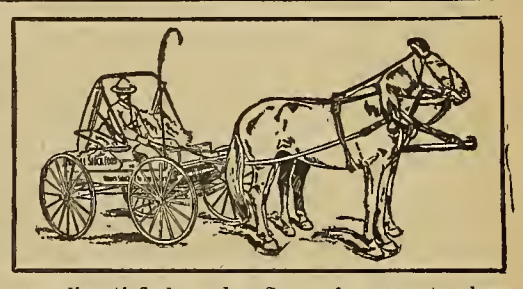
"I reckon you'll have to put off them plans of ours for a few days, Aunt Kate," he said, thrusting his head hurriedly into the room. "I've got business to home, but I'll come back ag'in." Before she could answer his heavy boots were heard in noisy flight through the hall.

The railroad station was half a mile away. Already the through train for the South was backing in under the great dome. When it pulled out Jake was on board, radiant, but fuming at the tardiness of a train which would not go faster than sixty miles an hour.

Joseph's Canal

There is a canal in Egypt more than four thousand years old. It was built by the government under the direction of "Joseph, the brother of Benjamin, the son of Rachel and Jacob, the son of Isaac, the son of Abraham, the chosen of the Lord." It is known as the Bahr-Yusuf. It waters the province of Fayyum, endowing it with fertility and supporting a large population all these centuries. This canal has been an important aid to commerce. It leaves the Nile at Aisut and runs almost parallel with it for two hundred and fifty miles, until it gains an eminence, as compared with the river-bed, which enables it to turn westward through a narrow pass, seventeen feet above the mean level of the river, and enter a district otherwise shut off from the fertilizing floods on which all Egypt depends. Herodotus, Strabo and Pliny declared that the construction of this canal furnished a channel of navigation and irrigation to an entire province, and moderated the climate, so as to make it habitable.—The Chicago Record.

WORK FOR MEN



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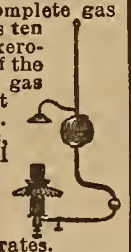

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Reindeer in Alaska

The expansion of our country and the annexation of people of foreign habits and speech will add many new industries to the already diversified list now protected by the American flag. As a rule our government is not paternal and leaves the development of productive interests to private enterprise. But one of the most novel, and at present most promising, industries on our continent owes its origin to official effort.

During the administration of President Cleveland Mr. Sheldon Jackson, a Protestant missionary to the territory, was appointed Superintendent of Education for Alaska. One of the first duties of the new superintendent was to call attention of Congress to the starving condition of the Eskimos along our Alaskan coast, owing to the destruction of the walrus and whale. A tour in 1891 revealed whole villages so destitute that the survivors were too weak, in some instances, to bury the dead.

From time immemorial the natives of the Siberian coast have been accustomed to traverse the narrow strait and barter their reindeer-skins in Alaska for seal-oil. Mr. Jackson conceived the idea of importing domesticated reindeer into Alaska. As an experiment sixteen deer were brought, proving that the sea voyage could be made. But it was found that it required skill to manage and train the deer, and the natives needed teachers. Quite undaunted Mr. Jackson persuaded Congress to import a company of Finns and Lapps.

Mr. Jackson's plan was to establish a central herd for breeding purposes, and as the herd increased to apportion a number of trained deer to each mission station in connection with the various schools. A native boy who will apprentice himself for five years and thoroughly master the industry is furnished with sufficient deer to start a herd. So far about two dozen natives have graduated, and an increasing number are entering such an apprenticeship.

What, then, is the economic value of these reindeer? In Lapland the domestic herds number four hundred thousand head and yield the government an annual tax of one dollar a head. But Lapland is small. Alaska is as large as England, Scotland, France and Germany. The natural food of the deer is found all over the territory. Two million deer and a population of one hundred thousand natives could be supported in Alaska.

In Norway and Sweden smoked reindeer-meat is retailed at ten cents a pound, and smoked tongues at ten cents each, and both are common in every butcher's shop. The undressed skins bring one dollar and seventy-five cents each. The best glue is made from the horns. The hair is used to stuff chairs, buoys and life-preservers. The marrow and hams are delicacies, and the blood and parts of the stomach make a nutritious native pudding. Sausages, tallow, tent-covers, clothing, coverings for snow-shoes, leggings, thread and cord are made from the skin, sinews and fat. Even the bones are soaked in oil and burned for fuel. The milk though not great in quantity is of excellent quality. Twenty-two thousand deer are annually slaughtered in Lapland for foreign trade. Since the extermination of the buffalo it will be singular if deerskins may become a cheap substitute for buffalo-robes in our own country.

Besides this the deer may be used as a pack and draft animal. A swift reindeer can make one hundred and fifty miles a day, and can drag a sledge over the snow at from twelve to nineteen miles an hour. They are superior to dogs and much easier to feed, for they dig through the snow to the moss below, the snow itself furnishing drink. No further care is necessary, while dogs must carry their supplies of fish. Deer are already being used in our mail service and as a pack-animal by our miners. A good reindeer carries a pack of one hundred pounds without fatigue.

At present there are in Alaska nine herds numbering between three thousand and four thousand deer. The natural increase of the herds is about thirty-three per cent annually.

The natives who possess trained animals are obtaining employment in transporting troops, mail and miners' supplies. In 1898 several hundred deer were loaned to the government by Antisarlook, a native, to carry food to the ice-imprisoned whalers at Point Barrow. By the terms of the agreement the government returned nine hundred and thirty-four domestic deer to this native to repay him for his trouble.

The Canadian government is contemplating the introduction of deer into Labrador and among the natives of the Hudson Bay. The average value of the domestic deer is about five dollars a head. The reindeer does not need to be acclimated to America, since our caribou is merely the undomesticated variety of the same species.

GILBERT L. WILSON.

The Boy Who Laughs

I know a funny little boy—
The happiest ever born;
His face is like a beam of joy,
Although his clothes are torn.

I saw him tumble on his nose,
And waited for a groan—
But how he laughed! Do you suppose
He struck his funny-bone?

There's sunshine in each word he speaks,
His laugh is something grand;
Its ripples overrun his cheeks
Like waves on snowy sand.

He smiles the moment he awakes,
And till the day is done;
The school-room for a joke he takes—
His lessons are but fun.

No matter how the day may go,
You cannot make him cry—
He's worth a dozen boys I know,
Who pout and mope and sigh.

—Sunbeam.

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1. They will, if used as directed, cure bodily pain as if by magic. They banish Backache, Neuralgia, Nervous and Sciatic Pains, Colds, Coughs, Quinsy, Croup, Pleurisy, Pneumonia, Pneumonia Fever, Soreness, Stiffness, Lameness, Strains, Sprains, Bruises, Cuts, Wounds, Growing Pains in Children, Lumbago, "Stitch in the Back," Inflammation, and other bodily Aches and Pains.

2. When used in connection with Oxien, the Wonderful Food for the Nerves, they promptly relieve and permanently cure Influenza, Nervous Prostration, Kidney, Liver, Heart, Lung and Stomach troubles. Dyspepsia, Sick Headache, Anæmia, Female Disorders, Malarial affections, etc.

TRADE MARK.

3. They act as an infallible safeguard against contagious and infectious diseases, and nothing equals them as a chest protector for both children and adults.

4. Their electrical action, and soothing, healing and vitalizing qualities, render them a blessing to Weak, Weary and Despondent Men and Women, whose starved nerves and pain-racked systems cry out for

UPROOTS DISEASE, BANISHES PAIN, SOOTHES, HEALS, CURES, AND IMPARTS GIANT STRENGTH

that Nourishment, Relief and New Vigor which Oxien, the Wonderful Food for the Nerves, and Oxien Electric Plasters, alone have been found to give.

5. They are a handy, cheap, ever-ready relief for Pains and Aches peculiar to Females, and are the safest, simplest, surest and cheapest Woman's Pain Cure ever discovered.

Although the price of Oxien Plasters is 25c. each, to the first seven hundred who will agree to test the powers of our Wonderful Discovery, and who will tell their friends if they find relief from their miseries, we will send a sample **Oxien Electric Porous Plaster post free.**

FREE TRIAL OFFER TO YOU

Thousands in America have been cured by this Wonderful Remedy, and many European cures have already been made. Write at once—to-day—and we will also send sample box Oxien free.

All communications to the **SPECIAL FREE TRIAL OFFER** must be addressed to

THE OXIEN ELECTRIC CO., 32 Willow St., Augusta, Maine

Hair on the Face

NECK AND ARMS Instantly Removed Without Injury to the Most Delicate Skin.

In compounding an incomplete mixture was accidentally spilled on the back of the hand, and on washing afterward it was discovered that the hair was completely removed. We named the new discovery

"MODENE"

Apply for a few minutes and the hair disappears as if by magic. IT CANNOT FAIL. Modene supersedes electrolysis. Used by people of refinement, and recommended by all who have tested its merits. Modene sent by mail in safety mailing-cases on receipt of $1.00 per bottle. Postage-stamps taken. Address

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We Offer $1,000 for Failure or the Slightest Injury.

GOLD WATCH FREE.

Here is a beautiful American movement solid gold-filled, dust-proof, hunting case watch (ladies' or gents' size), full jeweled, stem wind and set, fully guaranteed, given absolutely free for selling our jewelry. Why shouldn't you have this elegant watch? In the last five years we have given away thousands, and all are giving perfect satisfaction. Send your name and address, and we will send you 18 pieces of jewelry to sell at 10 cents each. When sold, return us the $1.80 and we will send you at once, prepaid, a fully guaranteed American movement watch.

HAYDEN MFG. CO., 125 Hayden Bldg., ATTLEBORO, MASS.

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To take orders for the best and cheapest Monumental Work on the market. We offer very liberal inducements and a straight, honorable and legitimate business. We make all grades of work and ship everywhere. You can operate in your own locality with or without other business. Experience or capital not required. Write at once for terms and particulars. Give age, occupation and reference. Mention this paper.

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FITS I wish every person in the U. S. suffering with Fits, Epilepsy or Falling Sickness to send for one of my large-sized 16-ounce bottles **FREE.**

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MYSELF CURED I will gladly inform anyone addicted to **COCAINE, MORPHINE, OPIUM OR LAUDANUM,** of a never-failing harmless Home Cure. Address MRS MARY D. BALDWIN, P.O. Box 1212, Chicago, Ills.

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OUR REMEDY GIVES RELIEF IN 24 HOURS. Address WOMAN'S MEDICAL INSTITUTE, Dept. 59, Detroit, Mich.

$8 Paid Per 100 for Distributing Samples of Washing Fluid. Send 6c. stamp. A. W. SCOTT, Cohoes, N.Y.

When Pa Beigns to Snore

My pa's got somepin' in his nose that's fastened
there to stay,
That all the neighbors wishes he would lose or
give away.
Some sort o' bellerin' affair, like bulls has in their
throats,
Or like a big bass horn, except it never plays no
notes.
Ma says it's sleepin' on his back, he says it is ka-
tarr,
But you can bet your bloomin' life whatever it
may are,
It's there fur doin' bizness, an' it does it, too, fur
sure,
As all the neighborhood kin tell when pa begius
to snore.

Ma says if she'd 'a ever knowed that he was such
a fright
A try'n to skeer the livin' out an' rise the dead at
night,
She'd never have consented fer to be his lovin'
wife
An' share his sorrows an' his joys an' lead a sleep-
less life.
It's hard on me the same as her, fur when I git
asleep
An' dreamin' I'm a hunter bold out in the forest
deep,
I feel my hair a r'isin' up to hear a lion roar
An' then wake up in fright to hear it's pa begun
to snore!

Ma says that some day when we git to heaveu
afterwhile,
Where every prospeck's goin' to please an' only
man be vile,
If people there is jest the same as people here be-
low,
She can't imagine how she's goin' to bear the load
o' woe!
She thinks that at the usual time up there amongst
the blest
The angels 'll be broken o' their sweet seleschul
rest
An' tumble 'round a while an' then git up an'
walk the floor
An' wish he'd never bin redeemed when pa begins
to snore!

—James Barton Adams in Denver Post.

His Memory was Good

Mr. S. wanted to move from the city to a small town near by, in which there were but one or two stores. He would be in the city every day and agreed to purchase the "few little things" his wife could not buy in the village stores.

"You'd better put them down on a piece of paper," said Mrs. S. when about to give her first order."

"Oh, no," said Mr. S. "My memory is good."

"Well, then," began Mrs. S., "a spool of 60 black thread."

"Yes," said Mr. S.

"A yard of not too light and not too dark calico."

"Yes."

"A small hammer, a can of peaches, a dozen small pearl buttons, two yards of cardinal ribbon, silk on one side and satin on the other."

"Yes," said Mr. S. thoughtfully.

"A pair of slippers for baby, a dozen lemons, a good tooth-brush, a pineapple, two ounces of sky-blue yarn, an ounce vial of homeopathic nux vomica pellets, a"—

"Wait a second," said Mr. S., counting on his fingers and looking perplexed.

"And a bottle of vanilla extract, and a yard of triple box-plaited crepe-lisse rushing, and three yards of small checked nainsook, and"—

But Mr. S. had seized his hat and was running for the station.

What the poor man brought home was: A yard of bedticking, three yards of black crape, a bottle of vinegar, eight yards of nankeen, a scrubbing-brush, a pound of green yarn, 60 spools of "coat thread," a yard of very light and a yard of very dark calico and a pint bottle of homeopathic pills.

"There, my dear," he said triumphantly, throwing down his numerous packages, "I don't think you'll find a thing missing. Who says a man can't do shopping? My memory never played me false yet."—Buffalo Enquirer.

"Which?"

"What makes you suspect," her mother asked, "that Willian is inclined to drink more strong liquor than is good for him?"

"W-w-well, when he came h-home last night," she sobbed, "I went out into the upstairs hall and turned on the light and w-w-waited for him to come up."

"Yes, my poor child! Go on."

"Aud he l-l-looked up at me and said, 'S-s-shay, ol' g-g-girl, 'm I r-running a harem or are you t-t-triplets?' "—Chicago Record-Herald.

A Disturber of the Peace

St. Peter—"You can't come in here! You would annoy too many people."

Spirit (haughtily)—"But on earth I belonged to the W. C. T. U."

St. Peter—"I know it, madam. And this place is crowded with moderate drinkers."—Puck.

"Tickets!"

The poor Saxon "towrist"—what he may suffer in the Emerald Isle! There is a story on record of three Irishmen rushing away from the race-meeting at Punchestown to catch a train back to Dublin. At the moment a train from a long distance pulled up at the station, and the three men scrambled in. In the carriage was seated one other passenger. As soon as they had regained their breath, one said:

"Pat, have you got th' tickets?"

"What tickets? I've got me loife; I thought I'd have lost that gettin' in th' thrain. Have you got 'em, Moike?"

"Oi! Begorrah, I haven't."

"Oh, we're all done for, thin," said the third. "They'll charge us roight from the other side of Oireland."

The old gentleman looked over his newspaper and said:

"You are quite safe, gentlemen; wait till we get to the next station."

They all three looked at each other.

"Bedad, he's a directhor—we're done for now entoirely."

But as soon as the train pulled up the little gentleman jumped out and came back with three first-class tickets. Handing them to the astonished strangers, he said:

"Whist, I'll tell ye how I did it. I wint along the thrain—'Tickets, plaze, tickets, plaze,' I called, and these belong to three Saxon towrists in another carriage."—Harry Furniss, in the Strand.

Like Solomon

The other day Mrs. Norma Adams and Samuel Gardner, who live on adjoining farms, began suit to determine the ownership of a brood of fourteen turkeys. The brood, headed by two old hens, a white and a brouze, had been running the fields of both farms all summer. Mrs. Adams owned the bronze ben and Mr. Gardner the white. Each claimed that their respective hen was the mother of the brood. One of the witnesses before the justice testified that he had once turned a dog upon the straggling band of turkeys. At the approach of the dog the young birds flew into a tree, the bronze hen ran into the woods, while the white ben stood under the tree and gave battle to the dog, which she repulsed, then called the brood to her, and they marched off. After hearing this witness the justice decided that the white hen was the mother of the brood and gave the turkeys to Gardner.—Argonaut.

A Financier

Not long ago a western Kansas politician was asked by his wife to lay aside politics long enough one day to dig the potatoes in the garden. He consented, and, after digging for a few minutes, went into the house and said he had found a coin. He washed it off, and it proved to be a silver quarter. He put it in his jeans and went back to work. Presently he went to the house again and said he had found another coin. He washed the dirt off it, and this time it was a silver half-dollar. He put it in his jeans.

"I have worked pretty hard," said he to his wife; "I guess I'll take a short nap."

When he awoke he found that his wife had dug all the rest of the potatoes. But she found no coins. It then dawned upon her that she had been "worked."—Argonaut.

Smart Alex

A man being about to die summoned his four sons to his side and said:

"My sons, I will leave to John one third of my estate, to Alex one fifth, to James one half and to Thomas one fourth, and thus you will all share equally."

John and James and Thomas took paper and pencil and began figuring, but Alex took his hat and started out.

"Where are you going?" the other three asked. "Do you not intend figuring out the problem?"

"Not much," said Alex. "I am going for a lawyer to break the will."

Moral—Sometimes the lawyer can relieve the heirs of much of the figuring.—Baltimore American.

A Safe Guess

"I was just reading here that they have discovered the grave of Hippocrates."

"Who was he?"

"Must be some fellow who's dead, I guess."—Cleveland Plain Dealer.

Infantile Pride

"Pooh! My papa wears evenin' clothes every time he goes to parties."

"That ain't anythin'. Our minister wears his night-clothes every time he preaches."—Cleveland Plain Dealer.

Their Mistake

First Little Girl—"The doctor brought us twins yesterday!"

Second Little Girl—"That's where you made a mistake. You should have had a homoeopath!"—Life.

I Will Cure You of Rheumatism

NO PAY UNTIL YOU KNOW IT

After 2,000 experiments I have learned how to cure Rheumatism. Not to turn bony joints into flesh again; that is impossible. But I can cure the disease always, at any stage, and forever.

I ask for no money. Simply write me a postal and I will send you an order on your nearest druggist for six bottles of Dr. Shoop's Rheumatic Cure, for every druggist keeps it. Use it for a month, and if it does what I claim pay your druggist $5.50 for it. If it doesn't, I will pay him myself.

I have no samples. Any medicine that can affect Rheumatism with but a few doses must be drugged to the verge of danger. I use no such drugs. It is folly to take them. You must get the disease out of the blood.

My remedy does that, even in the most difficult, obstinate cases. No matter how impossible this seems to you, I know it, and I take this risk. I have cured tens of thousands of cases in this way, and my records show that thirty-nine out of forty who get those six bottles pay, and gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal-card or letter. Let me send you an order for the medicine; also a book. Take it for a month, for it won't harm you anyway. If it cures, pay $5.50. I leave that entirely to you. Address Dr. Shoop, Box 910, Racine, Wis.

Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

Catarrh can be Cured

Catarrh is a kindred ailment of consumption, long considered incurable; and yet there is one remedy that will positively cure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption, and nervous diseases, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper.

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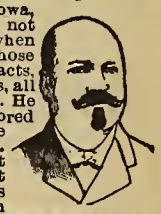

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FAT

How to reduce it

Mr. Hugo Horn, 344 E. 66th St., New York City, writes: "It reduced my weight 40 lbs. three years ago, and I have not gained an ounce since." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc.

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FARM SELECTIONS

Rotation of Crops

THE benefits of rotation in crop production have been long recognized, and various systems have been practised. The reasons for such benefits and the best systems to be followed have been studied only in recent years. Many of the experiment stations are carrying on work along this line. As it takes some time to gain definite results, the greater amount of it has not as yet been reported. The objects to be attained in a system of rotation are the maintenance of fertility with the continued production of crops and the increase in productiveness of naturally poor or worn-out soils.

The results of rotations carried on at the Rhode Island station are now being reported in a series of bulletins. These experiments were made for the purpose of improving worn-out soils. The soil used was very poor and had become so reduced by continuous cropping as to be wholly unfit for producing profitable crops. During one season planted to corn the plants made a growth of only five or six inches. The method adopted to bring this soil up to a state of fertility was to combine rotation of crops with application of commercial fertilizers. An account was kept of each plat, charges being made for fertilizer and labor, and credit being given for crops produced.

The reasons for rotating crops are stated to be as follows: All plants do not draw to an equal extent upon the manurial ingredients of the soil. They send their roots to different depths, and have a different solvent action upon the constituents they reach. By rotating crops insect enemies are more apt to be dispersed. Fungus diseases may also be materially reduced. The soil is maintained in good tilth, and bacteria which are beneficial to the plants are more likely to be increased. Weeds are more readily eliminated, the humus compounds of the soil increased, and the work of the farm more easily distributed.

The rotations reported are of three, four and five year periods. During the first course, in a three-year rotation of potatoes, winter rye and clover, the value of the crops was less than the total expenses in five out of nine instances, the average loss a year amounting to six dollars and seventy-nine cents an acre. During the second course of the rotation there was an average profit of twenty-three dollars and fifty-four cents an acre annually. In the four-year rotation of corn, potatoes, winter rye and red clover the expenses of the plats in the first period of the rotation were greater than the income from the crop produced. During the second course, as far as reported, good profits resulted. In undertaking the renovation of poor land by such means as those described some ready capital is necessary until the land can be brought to a paying basis. In a five-year rotation of corn, potatoes, winter rye, and grass two years, the results were not as favorable as in the two cases previously mentioned.

A series of rotations has been carried on for fifteen years at the Missouri and Indiana stations. At the Missouri station relatively large yields were obtained by this method over continuous cropping. At the Indiana station the conclusion has been reached that not only can larger crops be secured, but that the fertility of the soil can be better improved by judicious rotations. A comparison of continuous grain-growing with the rotation of grain with grass and clover showed a gain by the latter method of six bushels of corn, seven bushels of oats, and six bushels of wheat an acre. The average percentages of gain were for corn twenty-two, oats twenty-six, and wheat forty-four per cent.

In such systems of farming as sugar production in the South and wheat production in the Northwest a condition has been reached where a system of rotation must be employed.—Farmers' Bulletin No. 144, United States Department of Agriculture.

The Dehorning of Stock

The first dehorning on a large scale in this country of which there is any record was done by an Illinois farmer, who was engaged in the production of beef-cattle. Previous to this there had been sufficient experience in the necessary surgical work of veterinarians to know that the horns could be removed from a mature animal without any particular danger to its life. At different places in Europe dehorning had been practised for a number of years, and it is very likely that it was the reports from these places that first led to the practice in this country. It was not long after the first dehorning in Illinois that its advantages were realized, and the practice spread rapidly. The beef-herds were the first dehorned, and then the dairy-herds, as it was seen that at times horns were a disadvantage among milking-stock. The idea spread east and west to some extent, and now in any part of the country herds of dehorned cattle are a familiar sight, while in the middle West, among the large beef-raisers, and even among the dairymen, the great majority of the herds are dehorned. Especially is this so among the working herds of cattle. In show herds the consideration of the natural appearance of the animal retains the horns.

The horns of cattle were evidently given to them as a means of defense. With their domestication the need of horns has entirely disappeared, and in fact the horns in most cases are a positive injury to the herd, and are certainly a menace to the attendants, as well as making the herd less economical in a number of ways. In the raising of all kinds of stock the well-being of the individuals of the herd is always the first consideration; but in a herd where all the cattle have horns it is a rather common occurrence for one of them to be injured by hooking from another animal. It may be nothing more than a gash, but it is painful to the animal receiving it, injures the hide, and in some cases may prevent growth for a time. Sometimes a valuable cow or steer is killed, and where horses and cattle are allowed to run together, as they often are, it is very common for a horse to be killed or severely injured by being hooked. In the feed-lot there is a material economy of space by having cattle without horns. Less shed-room and not so much trough or manger space is required. Especially is this true where a few in the herd are unusually vicious, as is often the case; and where there are a few timid animals twice as much space is required to insure that the timid ones shall receive their fair share of feed and shelter. Where all the members of the herd are without horns fattening steers will stand as closely around a feed-box as they can be packed, and the shed-room required is determined by the actual space needed by each animal for its comfort. The timid ones in the herd soon learn that the others can cause them no pain, and the bosses find that it requires too much of an effort to keep the others on the move, and the result is a more peaceful herd, which fattens more evenly with considerably less space.

With dairy-cows, which spend a large share of their time in stables, the greatest objection to horns is from the injury which may be suffered by attendants. In caring for milking-cows it is necessary to come very close to the heads of the animals, and in tossing the head around either in fright or in fighting flies there is danger of the attendant being struck in the face and painfully injured. The cows often injure each other, too, and taking it all in all make a very much quieter herd if they are without horns.

The necessity of having the horns removed from bulls, especially if they are allowed to run loose a part of the time, is being continually called to mind. In very few instances have the numerous deaths caused by vicious bulls been caused by one without horns. Bulls as they advance in age are very prone to become ugly and hard to manage; but if their horns are removed they realize that they are deprived of their natural weapons, and are much less likely to attempt to injury any one.—Bulletin No. 78, Maryland Experiment Station.

Study the Markets

A very important point in successful gardening is the market. It pays to cater for the best trade, whether among dealers or private customers, and to do this successfully one must know their demands. For instance, the short or half-long varieties of carrots, the round or half-long beets, the green-podded or wax varieties of beans, all have their champions among customers, and a thorough knowledge of these facts often adds much to the profit side of the account. In many markets the prejudice, as between the red and purple varieties of tomatoes, is very strongly marked, and as to size many customers can hardly be induced to touch the extra-large varieties, no matter how superior their quality, until they have once been induced to test them.—J. E. Morse, in Rural New-Yorker.

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It pays for itself on the first crop grown after its use.

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will save more hard labor, more time, more money and bring about better results than any other machine that can be employed on the farm. It trebles the value of even a small amount of manure. It is the only thing that can successfully top dress wheat in the spring, meadow lands, pastures, etc. Can be hauled onto any land easily and without injury to land, as wheels have broad tires. Can be turned on the ground it stands on, as front wheels turn entirely under. It is strong and durably made of good material and with ordinary care will last indefinitely. Greatly improved for 1902. Send for new illustrated catalog and "How to Grow Big Crops"—Free.

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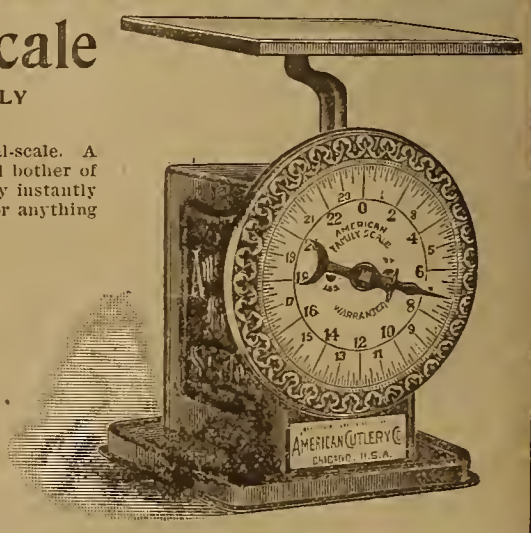

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FARM SELECTIONS

Maintenance of Soil-Fertility

PROFESSOR E. F. LADD, of the North Dakota station, reports experiments and observations which lead to the conclusion "that humus, at least in regions of low annual rainfall, like the Dakotas, plays a more important role in agriculture than has generally been ascribed to it." It may safely be said that this is generally true. Professor Ladd's investigations show that as humus decreases in soils they "become less productive, less retentive of moisture, and inferior in physical quality, while, on the other hand, it was found that an increase in the percentage of humus is accompanied not only with an increase in percentage of phosphoric acid extracted with the humus, but also with a greater productivity of the soil. . . . As the humus increases it seems to cause portions of the phosphoric acid, till then existing in an insoluble form, to become transformed into a soluble form, and thus, presumably, to become more readily available as plant-food. The same is true as regards the potash, lime and other soil constituents." If more attention were given to maintaining an abundant supply of humus (partially decayed organic matter) in soils they would be more productive, require less artificial fertilizing, and respond more generously when commercial fertilizers are used. To keep the soil in the best chemical and physical condition Professor Ladd maintains that a system of rotation should be practised, which alternates humus-producing with humus-consuming crops. In fact, Professor Ladd claims that "soils fertile by nature, such as the Red River Valley soil, should, under a system of agriculture as indicated above, yield good crops without the aid of commercial fertilizers for a thousand years. This assumes the proper use of all barn manures and prevention of unnecessary loss from the soil. A proper system of crop rotation should result in enriching the surface-soil with plant-food rather than in depleting it, and especially should this be true for nitrogen and humus." On the other hand, the continuous growing of wheat or other grains or cultivated crops rapidly diminishes the supply of organic matter, and hence decreases the humus and nitrogen. The growing of leguminous plants—clover, peas, etc.—which are nitrogen-accumulators, in a crop rotation causes a marked increase of humus and nitrogen in the soil. In the North Dakota experiments the plowing under of green crops did not produce as beneficial results as came from the breaking of grass-lands. "Plowing under a green crop leaves the organic matter in a mass and not uniformly distributed throughout the soil. . . . Soils filled with a mass of grass-roots furnish in all parts of the soil a uniform supply of organic matter, which by gradual decay furnishes the soil humus. This humus, reacting upon the mineral constituents of the soil, seems to aid in liberating and rendering available this plant-food." Moreover, the newly broken soil being permeated by a mass of fine grass-roots is thus protected from being drifted by the wind. The system of rotation recommended as most nearly ideal for the maintenance of the fertility of the soil is "two years in grass, followed by a cultivated crop, then two years in grain crops."

The continuous growing of wheat or other grain or of a cultivated crop not only rapidly depletes the soil of organic matter, but causes the rapid formation of nitrates, which are likely to be washed down in the soil below the reach of the roots of plants. In Professor Ladd's experiments the largest amount of nitrates was found at a depth of three feet in bare fallow, while at a depth of seven feet the amount of nitrates was larger than at a depth of one foot. Since no nitrifying organisms were found in the soil at a greater depth than two feet it is evident that the nitrates found at a greater depth than this were leached down from above.—Farmers' Bulletin No. 144, United States Department of Agriculture.

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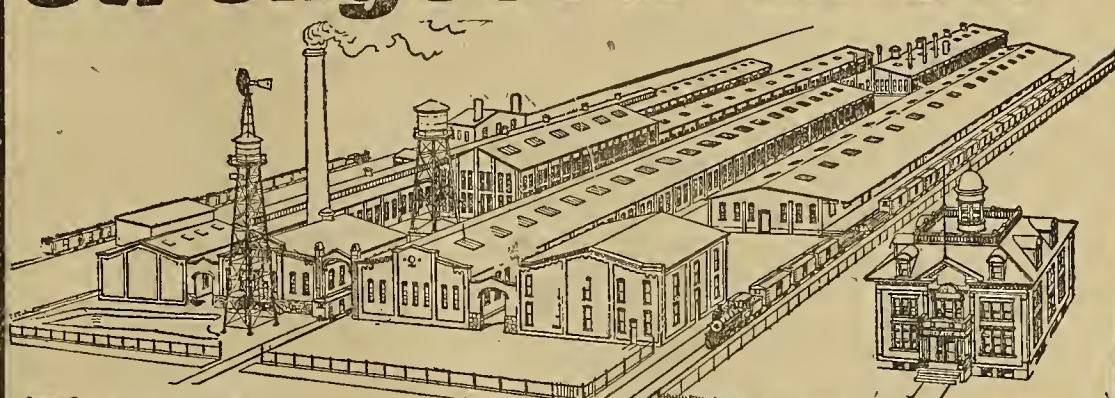
Galvanized Steel Wind Mills...

Strongest and Best.



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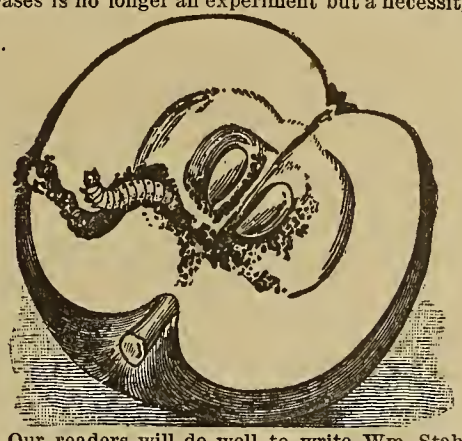

Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contain much valuable information, and may be had for the asking.

A Good PLANTER should plant all kinds of field seeds, *Field, Ensilage and Sweet Corn, Peas, Beans, Sugar Beets, Stock Beets, etc.* It should plant in hills, drills or check at the will of the operator. It should at the same time drop or drill all kinds of commercial fertilizers, wet, dry or lumpy, pulverized hen manure and other home made fertilizers, evenly in any quantity per acre.

EASILY ADJUSTED. EASY TO HANDLE. WEIGHS 150 LBS.

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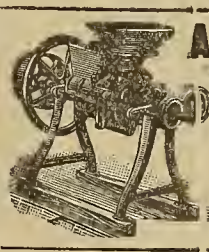

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Japanese Climbing Wonder

This discovery in tomatoes is a *perfect wonder*, and the most magnificent in America. It is new to American people, and every one who grows tomatoes should have it. At enormous expense I secured a quantity to offer this spring. It is very early ripening in Canada, large perfect fruits, beautiful red color, very solid, and few seeds. If you once get seed you would not take $5.00 for it, because it must be grown to be appreciated. You cannot obtain this seed elsewhere.

Sure Crop Cabbage is the earliest in the world. Sure of a crop, and sure to head every time. Excellent quality, good keeper, and first introduced this spring. You will have first cabbage in your neighborhood if you plant it.

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50 Brilliant Flowers is another of my 1902 specialties, and will produce a magnificent display of flowers. Their beauty is beyond description; cost hundreds of dollars to collect the colors.

My Souvenir Catalogue is filled with bargains, colored plates photographic reproductions, premium offers, and new plans worth dollars to anyone. 800,000 copies going out. It is free.

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FARM SELECTIONS

Burlesque Free Seed Bill

60TH CONGRESS, 1ST SESSION. H. R. 4-11-44.

IN THE HOUSE OF REPRESENTATIVES.
33d of December, 1901.
Referred to the Committee on Agriculture.

Mr. Squash introduced the following bill:

A BILL

For the Absorption by the General Government of all Seed Firms in the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That in view of the insufficient volume of the forty-seven millions of seed packets to be distributed during the spring of 1902, the quantity, which, under the demand for free seeds has risen from the original half-million packets to the volume above indicated, shall at once be further increased to one hundred millions; and to be better able to carry out the intended distribution the Secretary of Agriculture is authorized and empowered to purchase the stock, good-will and fixtures of every seed house in the United States

The Secretary is further authorized and empowered to purchase every seed firm, which may hereafter be established, that there may be carried out the full intent of Congress; to wit, that the seed trade of the United States, as now partially conducted under private incentive, shall by government be absolutely absorbed, and as a private business be destroyed now and forever; the Department of Agriculture being finally charged with the conduct of this particular line of commerce as an initial step for more extended absorption of many other commercial and manufacturing pursuits, the produce of which the free and independent citizens of the greatest nation in all creation should have free.

If the seed establishments decline to dispose of their business, the Secretary of Agriculture is empowered to stop them by injunction, so that to the government alone shall be intrusted the distribution of garden "sass."

Drinking Versus Sucking Calves

For two years I have raised my calves by letting them take their milk in the natural way by sucking it through a calf-feeder. The results are astonishing—not one case of scours, not one calf offered to suck a cow, not one calf had to be cruelly starved to force it to gulp its milk down, but every one has thrived from the start.—I. H. Hall, in Breeder's Gazette.

Catalogues Received

F. B. Mills, Rose Hill, New York. Illustrated catalogue of seeds and plants.

The De Laval Separator Co., New York. Calendar hanger, illustrated in colors.

Ford Seed Co., Ravenna, Ohio. Descriptive catalogue of vegetable, flower and field seeds.

The Iowa Seed Co., Des Moines, Iowa. Illustrated catalogue of garden, flower and field seeds.

Noxall Incubator and Brooder Co., Quincy, Ill. Illustrated catalogue of incubators and brooders.

S. L. Allen & Co., Philadelphia, Pa. Catalogue, illustrating and describing the "Planet Jr." farm and garden tools.

Racine Hatcher Co., Racine, Wis. "A Book About Incubators," describing the Racine Hatchers and Incubators.

The Berger Manufacturing Company, Canton, Ohio. Descriptive circular of Berger's Twentieth Century corrugated steel pump.

West Michigan Nurseries, Benton Harbor, Mich. Descriptive catalogue of fruit-trees, plants, ornamentals, shrubs, vines, etc.

W. Atlee Burpee & Co, Philadelphia, Pa. "Burpee's Farm Annual." Illustrated catalogue of vegetable, flower and farm seeds.

The McGregor Brothers Co., Springfield, Ohio. "Floral Gems." Descriptive catalogue of plants and seeds. Illustrated color covers.

Johnson & Stokes, Philadelphia, Pa. "Garden and Farm Manuel." Honest catalogue illustrations, choice varieties and tested seeds.

The Barnes Manufacturing Company, Mansfield, Ohio. Illustrated catalogue of high-grade iron and brass hand and windmill pumps.

McCormick Harvesting Machine Co., Chicago, Ill. Catalogue, handsomely illustrated in colors, of their complete line of harvesting machinery.

The National Starch Company, New York. "Profit in Feeding." A treatise for the dairyman, stockman, and poultryman on gluten feed and the management of farm stock.

HANDSOME WATCH FREE

A Solid Gold Ladies' or Gents' watch costs from **$25 to $50. Don't throw your money away.** If you want a **watch** that will equal for time any **Solid Gold Watch** made, send us your name & address at once & agree to sell **only 8** boxes of our famous Vegetable Pills at 25 cts. a box. It's the greatest remedy on earth for Constipation, Indigestion & all stomach disorders & they sell like hot cakes. Don't miss the chance of your life. Send us your order & we will send the 8 boxes by mail. When sold you send us the money & we will send you the **WATCH** with

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the same day money is received. There is no humbuggery about this. We are giving away these watches to quickly introduce our Remedy—& all we ask is that when you receive the watch you will show it to your friends. Hundreds have received watches from us & are more than delighted with them. This is a glorious opportunity to get a fine **watch** without paying a cent for it & you should write at once. Address

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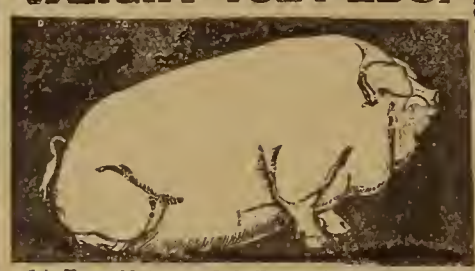
WEIGHT 1621 LBS.



The Poland-China hog called "Old Tom" was raised in Minnesota and was exhibited at Minnesota State Fair in 1897. He made a Big Gain by eating "INTERNATIONAL STOCK FOOD." "INTERNATIONAL STOCK FOOD" causes Hogs, Cattle, Horses and Sheep to grow very rapidly and makes them Big, Fat and Healthy. Is used and strongly endorsed by over 500,000 Farmers. It is sold on a Spot Cash Guarantee to Refund Your Money in any case of failure by over 30,000 Dealers. It will make you extra money in Growing, Fattening or Milking. Owing to its blood purifying and stimulating tonic effects it Cures or Prevents Disease. It is a safe vegetable medicinal preparation to be fed in small sized feeds in connection with the regular grain. It Fattens Stock in 30 to 60 Days less time, because it aids Digestion and Assimilation. In this way it saves a large amount of Grain. The use of "INTERNATIONAL STOCK FOOD" only costs 3 FEEDS for ONE CENT. Ask your dealer for it and refuse any of the many substitutes or imitations. It always pays to feed the best. "INTERNATIONAL STOCK FOOD" is endorsed by over 100 leading Farm Papers.

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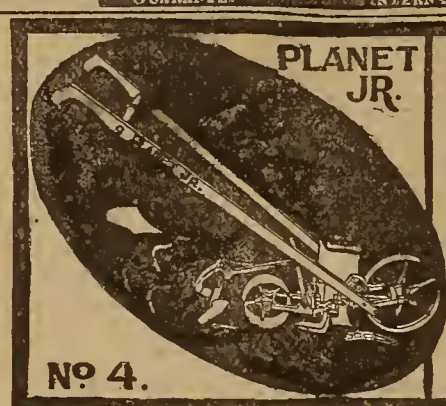

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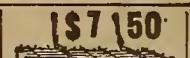

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Also Plows, Cultivators, Scales, Hay Tools, Carpenter & Blacksmith Tools, Washing Machines, Wringers, etc.

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3 SUPERIOR The York Imperial and Ben Davis Apple, with scores of other varieties. Standard Kieffer Pears, and Gordon Peach are only three of the many fine varieties we are showing this year. An orchard started on such a selection would make money be-

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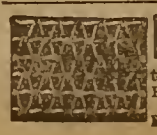

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Cuba's Agricultural Opportunities

BY FREDERIC J. HASKIN

WHILE Cuba is famed for its agricultural resources, its possibilities in this respect have been only partially developed. Although the island has been inhabited for hundreds of years there are still enormous tracts of land in the four western provinces awaiting cultivation. They are supporting at present only a fraction of the population which might live upon them, and which is really needed to properly develop their varied resources. The same is true of Santiago, the extreme eastern province, only a small portion of which has ever been under cultivation. The soil and climate of the islands are favorable to the production of almost everything. Frost is unknown in Cuba. During the December cold weather in the United States, when the ground was frozen as far south as Tampa, Florida, barefooted children were playing in the streets of Havana, and men were lounging about the parks or drinking in the cafes in their shirt-sleeves. The incredible richness of the soil offers unexcelled opportunities for the planter and agriculturist of moderate means. A better country for young men with some capital could not be found. The matter of health need be of no concern, as precautions are unnecessary, except moderate care at first until the period of acclimatization is passed.

The greatest obstacles to the development of the island have always been the unstable government and the uncertainty of protection to life and property rights. Since the American occupation began these have been assured. The future government of the island will guarantee the same protection. The Cubans will soon have an opportunity to govern themselves, but it will be under the watchful eye of the United States. No other power will be allowed to interfere with their affairs, and if the Cubans prove inadequate to the task the United States will, in all likelihood, be called upon to again take the reins of government and continue in charge permanently. This arrangement provides for the personal safety of those who would take up their residence in the island, as well as of any property interests.

Considerable difficulty stands in the way of acquiring land in Cuba, on account of the intricate titles and the imperfections that often occur in them. The old Spanish custom of establishing metes and bounds differs radically from that in vogue in the United States. Instead of measuring land in squares they marked it off in circles. The rule was small holdings, consequently when a planter desires to buy up several of these farms for the purpose of consolidating them he finds great difficulty in acquiring the waste ground around the edges of the circles. In addition to the trouble derived from this source the great age of the country tends to make the titles cumbersome, and in a great many instances unreliable.

CUBAN PLANTATION SCENE—PLOWING A CANE-FIELD

Aside from the difficulties which frequently accompany its acquirement there is inducement to secure Cuban land at present. There are fine tracts in the interior that can be purchased for one dollar and fifty cents an acre. Excellent fruit and tobacco land near the seacoast can be bought for from five to eight dollars an acre. These prices will advance.

Another feature which has been a serious hindrance to the agricultural development of the island has been the scarcity of good roads. Outside of the communities surrounding the cities there are few roads in all of Cuba worthy of the name. What highways do exist can be used for wagons during the dry season only. During the period of rainfall they become almost impassable. Considering the fact that there are only a little more than one thousand miles of railroad in the entire country, it will be seen what a serious handicap this has been.

The planters and small farmers of the island appreciate more than any other class the opportunities that are now open to them. On account of the many wars that have swept the island they have been repeatedly reduced to an impoverished state, and have suffered innumerable hardships. They have never before had the advantage of good farm implements. Heretofore they have been compelled to buy all their machinery in Spain. The manufactures of that country are not nearly up to the standard of those of the United States. Many of the best Cuban planters have never seen the improved machinery that is in general use among American farmers. Since the American occupation, however, agricultural implements are on the free list, and as soon as they are able to buy them the Cuban tillers of the soil will be able to equip themselves with modern implements. The government has already purchased large quantities of hoes, axes and plows for free distribution among the poorer classes, and the results show that the Cuban farmer will not long remain unenlightened now that he has the opportunity to get abreast the times.

Two crops of corn can be produced yearly in Cuba—one in the wet season and the other during the dry period. The first is planted during April and May and harvested in August and September. The second is planted during October and November and harvested the next February and March. Two crops of beans can also be raised annually. They are planted the same time the corn is put in, but are harvested somewhat earlier if put on the market in a green condition as string-beans. Great quantities of peas are sown the year round, and are generally picked and marketed as soon as they begin to ripen, finding a much more ready sale in a green state. Barley, rice, oats, hemp, cotton and rubber are on the list of products which are grown readily in Cuba, but have not as yet been cultivated to any extent.

There is no question about Cuba offering a fine opportunity in the stock-raising business. Very quick returns can undoubtedly be had on capital invested in this manner. Large sections of it are naturally adapted to the business, affording an abundance of fine grass and a plentiful supply of good water. During the past the breeding of stock was a well-developed industry, but excessive taxes —which sometimes amount to more than forty per cent of the value of the animals— tended to reduce it, and during the war many thousands of cattle disappeared. After the war there were no signs of any kind of live stock. The people were so poor that the work of restocking the ranges was well-nigh impossible. As an illustration of how impoverished the people were, and how little has been done toward the re-establishment of such a very important industry, it may be stated that the government made an appropriation of one hundred thousand dollars and imported from Mexico about three thousand head of cattle, which were sold to the farmers at cost prices and on easy payments, in order to give them a start. Only four or five head were sold to each individual. The most of them were used in breaking the land. The best ranges are to be found in the elevated lands, extending from Santa Clara to Santiago province, although the central province of Puerto Principe is an admirable grazing section, having derived its Cuban name from the native term for cattle-pasture. In importing cattle to Cuba it is necessary to procure the kinds which are immune from Texas fever. Those shipped in from the States will not remain immune from this disease, and are generally used for beef immediately upon their arrival. The animals which thrive best in Cuba seem to be those from Venezuela, Honduras and Mexico. The crossing of live stock from the United States with that of the countries mentioned, as well as the native breed, will result in stock which will stand the climate well; but the strain is exhausted easily and must be renewed about every third generation.

Cuba is a good field for dairymen. The inhabitants now use large quantities of goat and burro milk. Instead of milking his animals at home and making the delivery with wagons the average Havana milkman drives his stock through the streets, and when he finds a customer he milks the burro

[CONCLUDED ON PAGE 3]

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315 PRIZES—WHY NOT MAKE $300.00?

For the exclusive benefit of Farm and Fireside people we are going to award three sets of prizes, 315 prizes in all, as given below. FIRST SET OF PRIZES is for raising greatest weight of seed-corn, second greatest, third greatest, etc., from one pound of Finest Thoroughbred Seed-Corn furnished by us. SECOND SET OF PRIZES for raising the greatest number of pods, second greatest, third greatest, etc., from one half pound of a new variety Matchless Stringless Beans furnished by us. THIRD SET OF PRIZES for growing the greatest number of roses, second greatest, third greatest, etc., on Three Fine Rose-Bushes furnished by us. You may enter one, two or all three contests. You keep all you raise, and sell it, or plant it next season, as you please. Read "HOW TO ORDER" and "HOW TO ENTER FOR MORE THAN ONE PRIZE" at bottom of page.

Corn-Raising Contest

$100.00 Cash and 104 Other Prizes

GOLDEN HARVEST YELLOW DENT CORN

Pronounced the best dent corn in the world. Our supply is obtained by special arrangement with the originator. Ears large and handsome, with good, deep grain of deep orange-color, and small red cob. Stalk medium size (not large), few suckers, slender and leafy. Makes the best of fodder. Two good ears to each stalk. Husks and shells easily. Ripens in 90 to 100 days, and makes a crop even in dry seasons, because so early maturing and strong in growth. Has yielded **one hundred and thirty-six bushels of shelled corn to the acre.** Suits greater variety of soils than any other corn we know of. A big yielder naturally, this corn has been so improved by seventeen years' careful hybridization and perfecting that it is now simply unequaled, and will weigh out more shelled corn to the bushel than any other variety on the face of the globe.

The yield from the seed we send you will plant a field next year. Or you can sell at big price for seed-corn. *A money-maker*, and you will miss a splendid opportunity if you fail to get a pound, aside from the $100 and other prizes.

LIST OF PRIZES

We will give the following prizes for raising the greatest weight of corn, second greatest, third greatest, etc., from one pound of Golden Harvest Yellow Dent Corn described above:

1st Prize—$100.00 Cash.
2d Prize—Fine Piano-Box Buggy; value $60.00.
3d Prize—Latest Improved Spring-Tooth Harrow; value $20.00.
4th Prize—Set Solid Leather Buggy-Harness; value $15.00.
5th Prize—Latest-Make Breaking-Plow; value $10.00.
50 Prizes—Handsome Engraved Watch to each; value $2.00.
50 Prizes—Solid Steel Wagon-Jack to each; value $1.25.

HOW TO ORDER

SEND US 50 CENTS (this is 35 cents for the Farm and Fireside, and 15 cents for cost of sending seed). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

ONE POUND GOLDEN HARVEST YELLOW DENT CORN

We will also enter your name for the Corn Prize Contest. Rules for weighing yield, making report, etc., sent with seed. Be sure to state which contest you wish to enter.

Bean-Raising Contest

$100.00 Cash and 104 Other Prizes

NEW PERFECTION STRINGLESS BEAN

This new bean is a cross between a strain of Extra Early Round Pod and an absolutely stringless wax variety, giving much larger and handsomer pod and without any string. It is also more prolific and ready for market a week earlier. Compared with other beans the pods are one third larger, averaging five to six inches long, and absolutely stringless. Bean unusually crisp, round, full and fleshy. Being extremely productive and easily grown. A very small patch will keep a family supplied the whole season. Grows without stakes or poles, being a true bush-bean. Seed is warranted pure, coming direct from the originator, who is one of the leading vegetable-growers in America. It is the perfection of stringless green-pod beans.

LIST OF PRIZES

We will give the following prizes for raising the greatest number of pods, second greatest, third greatest, etc., from one half pound of New Perfection Stringless Bean described above:

1st Prize—$100.00 Cash.
2d Prize—Set Elegant Parlor Furniture; value $50.00.
3d Prize—Latest-Make Double Cultivator; value $20.00.
4th Prize—Library of 50 Cloth-Bound Books; value $20.00.
5th Prize—Library of 25 Cloth-Bound Books; value $10.00.
50 Prizes—Handsome Dial-Scale to each; value $1.25.
50 Prizes—Set of Six Finest Silver-Plated Teaspoons, Engraved Initials, to each; value $1.00 each set.

HOW TO ORDER

SEND US 50 CENTS (this is 35 cents for the Farm and Fireside, and 15 cents for cost of sending seed). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

ONE HALF POUND NEW PERFECTION STRINGLESS BEAN

We will also enter your name for the Bean Prize Contest. Rules for counting the yield, making report, etc., sent with seed. Be sure to state which contest you wish to enter.

Rose-Growing Contest

$100.00 Cash and 104 Other Prizes

Three Prolific Queenly New Roses

Competitors in our rose-growing contest will be furnished three of the most beautiful and ready-growing roses in the world. The plants are extra large and uniform in size, and every one is now soon to bloom. Following is description of each variety:

WHITE MAMAM COCHET

A new, magnificent, ever-blooming rose. Flowers large and very double, with petals of unusually heavy texture, making it extra valuable in open ground. Has the vigor of an oak, with large, heavy foliage. Hardy and of extraordinary merit.

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In its shading of deep, coppery yellow unique and strikingly beautiful. Flower of good size and very symmetrical. One of the finest roses known for full and continuous blooming.

CLOTILDE SOUPERT

A strong, vigorous grower. Large, beautiful, double flowers borne in sprays, blending in color from a soft shell-pink to a pure satiny white. An extremely profuse bloomer.

LIST OF PRIZES

We will give the following prizes for growing the greatest number of roses, second greatest, third greatest, etc., on three rose-bushes, the kinds described above:

1st Prize—$100.00 Cash.
2d Prize—Set Handsome Dining-Room Furniture; value $50.00.
3d Prize—Ball-Bearing Sewing-Machine; value $30.00.
4th Prize—Complete Decorated China Dinner-Set; value $12.00.
5th Prize—Splendid Kitchen-Cabinet; value $7.50.
50 Prizes—Beautiful Cut-Glass, Sterling-Silver Top Salt and Pepper Set to each one; value $1.25 the set.
50 Prizes—Silver-Plated Butter-Knife and Silver-Plated Sugar-Shell, the set of two to each; value $1.00 the set.

HOW TO ORDER

SEND US 50 CENTS (this is 35 cents for the Farm and Fireside and 15 cents for cost of sending roses). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

THE THREE EXTRA LARGE ROSE-BUSHES

We will also enter your name for Rose-Growing Prize Contest. Rules for counting roses, reporting, etc., sent with rose-bushes. Be sure to state which contest you wish to enter.

HOW TO ENTER FOR MORE THAN ONE PRIZE

To enter any of the above contests the seeds or rose-bushes must be procured as above. No other kinds of corn, beans or roses can compete. You can enter one, two or all three of the contests. **FOR $1.00** (two contests) we will send you both corn and beans, or corn and rose-bushes, or beans and rose-bushes; we will also enter your name for TWO years' subscription to the Farm and Fireside, or send the paper to you one year and to any one else one year. **FOR $1.50** (three contests) we will send you the corn and the beans and the rose-bushes, and THREE yearly subscriptions to the Farm and Fireside for yourself or for your friends. The contest closes at the end of the harvest season of this year. Arrangements will be made so that all prizes will be awarded to those rightly entitled to them.

ORDER NOW SEEDS OR PLANTS SENT AS SOON AS YOUR ORDER COMES **NO DELAY**

Address Prize Contest, FARM AND FIRESIDE, SPRINGFIELD, OHIO

Cuba's Agricultural Opportunities

[CONTINUED FROM PAGE 1]

on the spot. Cows' milk is peddled in bottles and retailed at fifteen cents a quart. It is no secret that this is highly diluted with water. If you want pure milk you must go to the dairy and witness the milking, and, aside from the inconvenience, you must pay five cents more a quart at the dairy. Very little butter is used on the island, and it is all imported from the United States.

The cultivation of coffee is another industry full of great promise for the future in Cuba. The island has demonstrated that it can produce this valuable berry with a flavor and quality equal to that from the most favored coffee-raising sections of the world. It is a business which does not require a great outlay of capital, yet the investor must be possessed of sufficient funds to wait four, and possibly five, years for a return on what he does invest. Aside from this feature it is not expensive to cultivate. When the trees begin to yield they produce two crops yearly. In the beginning the seed is sown in a nursery and, like tobacco, transplanted after the plants are a few inches high. A full-grown, healthy tree will yield two pounds of coffee at each bearing. The trees are constantly pruned to prevent their attaining a height exceeding ten feet. The pruning tends to make them spread out. If they become any taller there is difficulty in gathering the crop. One of the desirable features of coffee-growing is not only the rapidity with which the trees bear, but that they require shade, and the ground devoted to their culture can be utilized for raising sundry varieties of fruit. This affords the planter an additional use for his soil, and thus adds to his income. Considering the fact that the coffee-habit is so well fastened upon the world in general, and Cuba in particular, the man who has coffee to sell is sure of his market.

Cocoa of an excellent quality is raised in Cuba in large quantities, and the list of fruits that can be produced is too long for enumeration. No matter how large the crop of Cuba's tropical products may become there will always be a ready market for its surplus in the United States. The great and rapidly increasing population of the island's near and powerful neighbor insures an outlet that no other tropical country can expect. When the Cubans have money they spend it freely. They do not manufacture, consequently they must buy nearly everything they eat and wear. For this reason the merchants of the United States may expect to increase their sales when the era of reconstruction in the Pearl of the Antilles gets under way.

—The greatest attribute of heaven is mercy;
And 'tis the crown of justice, and the glory,
Where it may kill with right, to save with pity.
—J. Fletcher.

A PUBLIC ROAD IN THE RURAL DISTRICTS OF CUBA

Correspondence

FROM LOUISIANA.—Gueydan is a prosperous little town of about seven hundred inhabitants. The country around is being settled rapidly by people from the Northwest. Real estate is increasing rapidly in valuation, and money is plentiful. Large fortunes are being made by cultivating rice, and all lines of business are prosperous. We have two large rice-mills. J. P.

Gueydan, Vermilion Parish, La.

FROM ARKANSAS.—This is a fine fruit country. The apple crop last year was immense and brought much money into the country. Orchards here last year sold all the way from three hundred dollars to five thousand dollars. We also have a good stock country. All kinds of grasses do well. Our climate is ideal; so, also, is the pure water which abounds everywhere. Land is not high. The writer bought a forty-acre tract for six hundred dollars with considerable fruit on it. Land will go higher soon. We have good railroads and educational facilities. J. B. P.

Avoca, Benton Co., Ark.

FROM NORTH CAROLINA.—This is a fine farming country. The land is gently rolling and well adapted to the raising of nearly all crops. There is no better country for diversified farming—cotton, grain, grass, stock-raising and dairying—than this. Crops are very poor this year, owing to the continued wet weather from early spring until fall. I have been farming half a century and I never saw as much rain and as many heavy, beating rains as we had this season. As a consequence a good part of the farms had to be abandoned to the grass, and farmers are very much discouraged, and some want to sell out. Now would be a good time to buy land, as land-values are bound to go up at an early day in the South. The price of land varies from ten dollars to thirty dollars an acre. R. H. H.

Pineville, Mecklenburg Co., N. C.

FROM LOUISIANA.—Webster Parish joins Arkansas on the north, and is about forty miles in length. It is heavily timbered and well watered by several creeks and by Bayou Doveheat, which traverses the parish from north to south. Of course, land here cannot compare with the rich river-bottoms and the prairies of the West and Northwest. Last season was extremely dry, but corn made forty bushels an acre and cotton eighteen hundred pounds. Ribbon-cane yielded six hundred gallons, worth fifty cents a gallon. Land-values are increasing every year. We raise fine fruit here. All kinds of stock do well, as we have good range. Minden, the parish-seat, is building up rapidly. By the way, there is a fine opening here for a good dairyman. We need improved methods of farming and stock-raising, and we do not appreciate as we ought our many natural advantages. K. W.

Shongaloo, Webster Parish, La.

FROM OREGON.—This is a stock-grazing and farming country. Oats, barley, rye and wheat do well here. We raise about thirty bushels to the acre. Hardy vegetables and fruits do well, also small fruits. We have to irrigate the most of the country. Alfalfa, clover and timothy are the principal grasses. There are still thousands of acres of government land to be homesteaded. Two railroads are building into the country, one of which will be here this summer. Prineville is a town of nine hundred inhabitants, with electric-light and water systems. Many full-blooded cattle are being raised here now, as well as other stock. There are immense herds of sheep in parts of the country, some men owning ten thousand head. There are good openings here for settlers and business men. Eggs range from twenty to fifty cents a dozen, and butter from forty to sixty cents a roll. W. T. F.

Prineville, Crook Co., Oreg.

FROM NEW MEXICO.—I have been a regular reader of the FARM AND FIRESIDE twenty-three years, and I hope to read it for twenty-five years more. I cannot say which is the best part, for it is all good. Perhaps some of the FARM AND FIRESIDE readers would like to know what our country is like. We have three hundred and forty days of sunshine out of three hundred and sixty-five in each year. All land that is tilled is irrigated. The possibilities of diversified crops are enormous. Fruits grow to perfection. If I should name the prices paid for all farm products many people would think I was telling a fish-story. However, there are large quantities of hay and grain produced here, and immense herds of cattle and sheep graze on the range. Day-laborers get from one dollar to one dollar and fifty cents and board the year round. This is the most healthful country I have ever lived in. This altitude is about five thousand feet. The people living here, mostly whites, are thrifty and prosperous. There are only forty-five hundred people in San Juan County, and there is room for three times as many more without crowding. The irrigated area is seventy-five thousand acres. The area not irrigated, but adaptable to cultivation, is one hundred and fifty thousand acres. The rivers feeding the irrigating-ditches are the Laplata, Animas and San Juan. In San Juan County the area in fruits is fourteen hundred and fifty acres. There were ten thousand boxes of apples and fifteen thousand boxes of other fruits shipped last year. There is seventy-eight hundred acres in alfalfa, and nearly forty thousand tons of alfalfa were cut last year. Prices of hay range from five to seven dollars a ton. G. W. H.

Laplata, San Juan Co., N. M.

A cross-mark in the space to the left means that there is a

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on the **SECOND** page of this issue of the FARM AND FIRESIDE. We call your attention to this because we believe that you will be particularly interested in the great offers described on that page, and will want to take advantage of them. Please send in your order promptly.

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WITH THE VANGUARD

IN HIS testimony before the Senate Committee on the Philippines Governor Taft gave the theory of the Philippine commission as to what form of government Congress should provide for the Filipinos. The plan he proposed is:

First, to give the people a qualified suffrage with a gradual growth in popular government, which should be enlarged through education in the English language and in American institutions.

Second, to institute within a reasonably short time a local legislature, to consist of two bodies, one to be chosen by vote and the other to be appointed.

Third, to permit the islands to send two or three delegates to Washington.

Answering questions by the committee Governor Taft stated that to grant independence he thought would have the effect of consigning the ninety per cent of uneducated people in the islands to the same servile position they held under Spanish rule; and that if the government of the islands should now be turned over to the islanders themselves there would be nothing less than an absolute oligarchy, they having no idea of civil government.

"I did not originally favor the acquisition of the Philippines," said Governor Taft, "and I was sorry at the time that we got them, but now we are there I see no other way than to go on and carry out the plan I have suggested. I may be a Mark Tapley in this matter, but if I did not believe that we could bring these people out, regardless of the fact that the feat we propose is to an extent unprecedented, and if I did not believe we should succeed in what we are undertaking, I should resign immediately and come home."

THE United States insists upon the permanent maintenance of the trade principle of the open door throughout all China by all the powers endeavoring to exercise influence within the limits.

At the time of the Boxer revolution, when the condition in northern China was one of virtual anarchy, the attitude of the United States was clearly set forth in a circular-note to the powers, dated July 3, 1900, as follows:

"The policy of the United States is to seek a solution which may bring about permanent safety and peace to China, preserve Chinese territorial and administrative entity, protect all rights guaranteed to friendly powers by treaty and international laws, and safeguard for the world the principle of equal and impartial trade with all parts of the Chinese empire."

At a time when we need and are seeking larger foreign markets, when the Orient opens up a magnificent prospect, when China in particular is increasing her imports of our flour, cotton goods, kerosene, railway material and other manufactured products, it is of the utmost importance to the people of the United States that the integrity of the Chinese empire be maintained, and that the open door be kept open.

Therefore, the Anglo-Japanese alliance, aimed to stop the advance of Russia upon China, deserves the hearty, moral sympathy and support of the American people. It is in line with the declared policy of our government. With Russia master of the Chinese empire there would be little hope for the equal commercial opportunities justly demanded by us.

Senator Cullom, chairman of the Foreign Relations Committee, says, "The Anglo-Japanese treaty is a good thing. Americans are glad of it. Of course, we have nothing to do with it, but we are pleased to have England and Japan take the stand they have taken. In my opinion public sentiment in our country will sustain the purposes of the alliance. We are in favor of the open door, and we believe the door is more likely to be kept open by preservation of the integrity of China."

THE House of Representatives February 12th passed by a large majority an oleo bill which is a more stringent measure than the original "Grout Bill."

It provides that the Original-Package Law shall not apply to the oleo trade; that states shall not be prohibited from the manufacture and sale of oleo; that any person who sells, vends or furnishes oleo for the use and consumption of others, except to his own family and guests thereof without compensation, who mixes any ingredient or coloration that causes it to look like butter of any shade of yellow, shall be a manufacturer of oleo, and subject to the tax of six hundred dollars a year imposed upon manufacturers; that colored oleo shall pay a tax of ten cents a pound, and uncolored oleo one fourth of a cent a pound; that wholesale dealers in oleo shall keep books, and render returns as may be required by the Secretary of the Treasury; that the Secretary of Agriculture shall cause a rigid sanitary inspection to be made of renovated-butter factories, inspect the product, and cause it to be branded and sold as renovated butter.

A new feature is the provision relating to renovated, "process" or "deviled" butter. There is a difference of opinion whether this will strengthen or weaken the bill when under consideration by the Senate. It ought, however, to go through with the rest of the bill. It is proper legislation against a detestable fraud.

IT IS the duty and the pleasure of contributors and editors to lay before the readers of an agricultural paper what will prove to be of real value to them. To go further is beyond their power. It remains for the readers to make the use and reap the reward. Many of them do, and it is most gratifying and encouraging to the editors to learn from them that they have done so. The following extracts from a letter written by a New Jersey subscriber illustrate the point:

"FARM AND FIRESIDE.

"DEAR FRIEND:—Four years ago I asked you what was the best kind of corn for me to raise. You answered, and advised me to try —— [a good, standard variety]. I did so, and am well pleased that I did. The first crop turned out extra well, and I sold about seventy bushels for seed at one dollar a bushel, and I have done as well or better each year since. In May, 1901, I sold forty bushels to a seed-house in New York City for one dollar a bushel. Recently I sold the same seed-house one hundred bushels for one hundred and twenty-five dollars. I have done well with it so far, and I think it is the best corn for this region, as it yields well and also makes fine fodder.

"Last spring I followed the advice given in your paper, and set one fourth of an acre to early cabbages between my strawberry rows. The plan was a success. I sold forty-four dollars' worth of cabbages, and the berry-plants grew well and made as fine a patch as could have been asked for. It cost more to work the berry-plants than it would if the cabbages had not been there, but the cabbages paid well for all the work and for the use of the land.

"The paper has been profit enough to me in the corn matter to pay the subscription for a lifetime, and I can be counted a lifetime subscriber. Thanking you for the good you have done me in the past, I remain

"Yours truly,

"C. T. ROGERS."

IN THE discussion about reciprocal tariff duties with Cuba by the sugar-refiners, beet-sugar manufacturers and Cuban planters, where do the consumers of sugar come in?

The true interests of the consumers are involved in the preservation and development of the beet-sugar industry in this country. That will, to some degree, safeguard the consumers against control of prices by the trust refiners of imported cane-sugars. Independent beet-sugar factories turn out a refined product in competition with the trust product.

CROP contests are not new, but they are none the less interesting for that. Competition adds zest to the pleasure of planting and growing special crops. In the contests provided for by the publishers of this paper, the seeds and plants to be furnished are choice, tested varieties, and the liberal rewards offered will be paid.

THE bill recommended by Governor Nash, reorganizing the Board of Control of the Ohio Experiment Station, had clear sailing through the Legislature, and is now a law. Executive action on appointments is the next thing in order. The Governor has the wisdom that comes from experience in reorganizing boards, and the true friends of the station confidently expect him to do the "square" thing and make a "new deal."

THE monthly average cash prices of corn in the Chicago market ranged higher in 1901 than during any other year since 1891. Prices ranged from thirty-six and seven eighths cents in January to sixty-five cents in December. If a bumper crop is raised this year, the market is ready for it.

Agricultural News-Notes

The food value of the Irish potato has been shown by the California Experiment Station to be about two thirds that of the sweet-potato.

Probably the largest wheat-field in the South is that of one thousand acres on the farm of Mr. Horatio Berry, Sumner County, Tennessee.

We cannot begin too quickly to supply our nearly or quite worn-out soils with organic matter by plowing under the broad-leaved or deep-rooted forage-plants.

California, Iowa, Minnesota and Wisconsin lead in the production of barley. The amount of barley now unsold is smaller than at any time during the past nine years, excepting the years 1894 and 1895.

Why continue to import what we ought to produce? On January 14th a cargo of twenty-six thousand five hundred and eighty-seven sacks of Scotch potatoes grown in Scotland arrived at New York. The total weight of the shipment was nearly two hundred tons.

There are now fifty-four agricultural experiment stations in the United States exclusive of those now being established in our insular possessions. Connected with these are about seven hundred skilled employees.

Mr. Franklin Dye, the energetic and enterprising Secretary of the New Jersey State Board of Agriculture, in referring to the most profitable lines of agricultural production in that state, in his last annual report says, "Aside from truck-farming I consider the growing of fodder crops, the milk-dairy and fruit-growing the most profitable farm pursuits for the Bergen County farmers." Bergen County is one in which the soil has been much exhausted. It is located in close proximity to New York City.

The Secretary of War gets at a "well-Root-ed" fact when he states that an educated soldier makes a better fighter than an uneducated one. The "Boston Herald" tersely adds "that it is the same way with the educated man with a hoe, pick or shovel."

Mr. B. H. Sewell, who is excellent authority on egg production, says, "The cost of green bone is a mere trifle and it requires only an ounce to each hen every other day. A bone-mill is as much of a necessity to a poultryman as an anvil to a blacksmith."

There are said to be no less than thirty-three cereal-food factories at Battle Creek, Michigan, and that the number is constantly increasing. The editor of the "Rolling Mill" facetiously remarks, "They do say about Battle Creek that the farmers have to grind their own feed."

It is reported that in the soil found clinging to the hoof of a Texas steer experts found three kinds of noxious weed and grass seeds common in Texas. It is in this way that troublesome weed-seeds are often distributed, to say nothing of infectious diseases that may be disseminated in the same way.

An indication of how to do business in a business way is shown in the following telegram from a leading fruit-commission house in St. Louis to a similar concern in San Francisco: "Wire us what you are loading or have in transit. California potatoes are inquired for. Quote us good stock. They are scarce here."

Greece leads all other nations in the world in the annual yield of honey from a single hive, the amount being one hundred pounds. The United States has the greatest number of colonies, with an average yield of twenty-two pounds. The leading honey-producing countries are Austria, Germany, France, Holland, Belgium, Russia, Denmark and Greece.

No better means as yet seem to have been provided for the diffusion of expert and accurate knowledge among hard-working farmers than that derived from attending "farmers' institutes," where plain talks from plain men, who, relating their own experiences, show how excellent financial results were accomplished. The "know-how" men are the only ones that the ever-busy farmer cares to take time to listen to.

The ideal system of agriculture is that where the fertility of the soil is annually increased, and where fair average crops can be grown without the purchase of commercial fertilizers. Soil that is made rich and deep by being subsoiled and plentifully supplied with decaying vegetable matter will give a far more profitable return than where a relatively large quantity of commercial fertilizer is used on land lacking a liberal supply of humus.

Is it impossible for farmers to secure the best obtainable prices without acting together? Unselfish co-operation would enable them to ascertain the true value of their products in the different markets of the world. Acting as individuals this is simply impossible. The time has come when producers should be to a much greater degree than now the pricers of their farm and orchard products. Why continue to seek information and prices from buyers? Why not investigate conditions for ourselves by ourselves? This cannot be brought about except by co-operative action based on accurate statistical information.

Considering the very flattering accounts of the profitableness of nut culture, especially of the chestnut, it is a little strange that so many neglect the planting of young chestnut and other nut-bearing trees wherever the land is too rocky and rough to admit of cultivation. The fact is overlooked that the nut-bearing trees are a sure source of profit to the owner. Should any of the young trees bear small and inferior nuts they can be grafted and will begin to bear very quickly. The sprouts that spring from the base of chestnut stumps can be grafted with the Paragon sweet chestnut, which is three or four times as large as the common variety. We ought to plant more nut-bearing trees. The fact is too often overlooked that trees of all kinds "grow while we sleep." Before we are hardly aware of it the chestnut and other varieties of nut-trees will begin to bear and furnish a sure source of income.

W. M. K.

RURAL AFFAIRS

Seeded String Some time ago I believe I mentioned "seeded string" as a new idea in planting vegetable-seeds. The originators or introducers of this innovation have furnished me some sample string, and I have tried it, with the result of getting a fair stand of strong plants, such as lettuce, radishes, carrots, etc. This was under greenhouse conditions. The operation of planting the short rows across the benches is simple enough, and I can see no objection to this new plan of sowing garden-seeds. For open-air operations, however, we will have to use a drill or machine, the "string" to be unrolled from a reel, and such drills are now being manufactured. But in regard to the real merits of the new scheme and its chances of taking the public fancy I am yet all at sea. One breaker ahead of its success may be the difficulty to furnish all the different varieties and strains which the public will want. Be that as it may, the experiment is at least interesting.

Ready-made Bordeaux Mixture A number of firms at the present day offer concentrated Bordeaux mixture, asking for it about twenty-five cents a gallon by the quantity, one gallon of the concentrated mixture making twenty-four gallons of standard spraying liquid. It is true that the experiment stations have always cautioned us to use only a freshly made Bordeaux mixture, and that the proper method of making it involves the mixture of already greatly diluted ingredients, especially of the lime-water. On the other hand, I know of no reason why a concentrated mixture could not be made that will maintain its efficacy for a long time. Neither do I know of recorded experiments made by any of our authorities to determine the comparative effectiveness of the Bordeaux mixture made freshly at home on one side, and of that made by freshly diluting the concentrated mixture put on the market by some fertilizer manufacturers and chemical works on the other. Such experiments should be made. I hope some of our experiment stations will undertake to do it. People who use large quantities of Bordeaux mixture will, of course, find it cheaper to make their own. The material to make it from will cost them a little less than forty cents for fifty gallons, while the mixture diluted from the ready-made (concentrated goods) costs at least one cent a gallon, and much more if bought in smaller quantities. Yet for us, who use only a barrel or two of Bordeaux mixture at a time, and possibly quite often still smaller quantities, to be put on garden vegetables, on a few small trees, on some grape-vines and early potato patches, etc., this way of making Bordeaux mixture, by the simple dilution of a purchased article in just such small or moderate quantities as wanted, would be decidedly convenient, and if I were sure that the concentrated (ready-made) mixture could be relied upon to give as good results as the other I would gladly pay thirty or thirty-five cents for the gallon of concentrated stuff rather than have to fuss with making my own. At present I believe there is some risk connected with the use of the ready-made mixtures. I prefer to follow the advice of the station experts and make my own Bordeaux mixture in the way already given in these columns, but I believe it to be vastly better to spray with the ready-made mixtures, properly diluted, than not to spray at all.

Bran and Middlings for Horses A reader in Hyde Park, Massachusetts, asks me whether it is safe to feed horses wheat bran and middlings, and how I feed these stuffs to my horses. Undoubtedly he has read in some paper the stories recently told about horses being made sick, and even killed, by giving them wheat bran. I doubt that free indulgence in genuine wheat bran, such as we get directly from the flour-mills in this vicinity, has ever been the direct cause of the death of either horse or cow, and I would not be afraid to turn either animal loose within reach of a well-filled bran-bin. Coarse bran is so loose that horse or cow will hardly eat more than can be taken care of. It would be different with middlings or other fine and heavy meals, and an animal could easily take too much of such. But in my way of feeding both the bran and middlings, and other meals as well, there is absolutely no risk. The coarse fodder is chopped up into about inch lengths, the bran or meal scattered over it, the whole sprinkled with water and then thoroughly mixed. For cows I cut and mix corn-stalks, for horses mostly hay. If I feed oats to horses I even mix them in the same manner with their coarse food, and only feed them unmixed in the rare case when I desire to get the team out to work again as soon as possible after their noon feed. There can be little doubt of this being a safe and economical method of feeding. The grain ration mixed all through the coarse fodder will be more thoroughly digested than when fed alone. If you give full rations of clear oats you will usually find a considerable percentage of it undigested in the droppings, which is not the case, at least to the same extent, if the oats is given in a mixture with the coarse food. I give from four to six quarts of the bran-middling mixture to each horse, and more to a cow in milk.

Fertilizer Questions I have a number of inquiries about fertilizers and their use. An Iowa reader wants to know where to purchase fertilizing substances in small quantities for experimenting in the garden and on grasses to best advantage—in other words, most cheaply. Let me repeat what has often been stated before; namely, (1) that the purchase of fertilizers simply means the buying of a certain number of pounds of nitrogen, phosphoric acid and potash, and (2) that the most progressive soil-tillers now restrict their purchases to standard chemicals. I for myself now seldom buy anything besides acid phosphate (dissolved South Carolina rock) for phosphoric acid, and muriate of potash for potash, but only small quantities of nitrate of soda for nitrogen, preferring to draw on the atmosphere for most of my nitrogen supply by means of planting leguminous crops, as the clovers, soy-beans, cow-peas, etc. What the inquirer and others who may wish to make such experiments want in this case is a moderate quantity of the three materials already mentioned, and the only question is where to get them. The general rule must be to purchase them from one of the nearest dealers in order to save transportation charges. Where are these dealers? A list of dealers from whom nitrate of soda may be purchased can be had by applying to the Chilean Nitrate Works, John Street, New York, and a list of firms dealing in potash by applying to the German Kali Works, Nassau Street, New York. Get these lists, then pick out the dealers nearest to you and ask them for prices. Most of these firms will also be in shape to furnish acid phosphate. The two New York firms before mentioned sell nothing. Their only aim is to distribute information about nitrogen and potash, and thereby create a greater demand for these goods.

Application of Fertilizers A Cape Vincent reader asks about the best kinds of fertilizer for celery, onions, etc., on sandy loam, and about the best mode of applying them. The second part of the question is easily answered. I believe in broadcast applications as a general proposition. If you mix the plant-foods thoroughly and evenly all through the surface-soil you may well rely on the plants to find them. Manuring in the hill is a damage almost as often as a benefit. The easiest way to put fertilizers on the land is by broadcasting or drilling in after plowing and harrowing. The land then is smooth and easily traveled over. If fertilizers are to be applied by hand-sowing, like grain (an easy operation in the case of nitrate of soda and muriate or sulphate of potash, and not so very inconvenient in the case of acid phosphate if this is first slightly moistened), a final harrowing may be given afterward. Frequently we apply nitrate of soda broadcast over the surface after seed is sown or plants (like onions and cabbages) set out. Neither this nor potash can get away. The answer to the first part of the query (what are the best kinds of fertilizer for this purpose) depends in a great measure on the existing soil conditions. If the soil is of an average quality, and already fairly well supplied with plant-foods, I would use something like this an acre: Two hundred pounds of nitrate of soda, two hundred pounds of muriate of potash, six hundred pounds of acid phosphate, possibly more, possibly less, of the whole, or of one or the other of the ingredients. This application gives three per cent nitrogen, ten per cent potash and eight and one half per cent phosphoric acid. If more nitrogen is thought to be required I would add one hundred pounds or more of dried blood or cotton-seed meal. The here-mentioned application of one half ton of fertilizer would probably cost about seventeen dollars, and at that price is a cheap, high-grade, complete manure.

T. GREINER.

SALIENT FARM NOTES

Spraying Fruit Every man who owns a fruit-tree should spray it. Not this year only, but every year. If spraying were faithfully attended to every year by those who grow fruit, either for themselves or for market, the insect pests and fungi that annually work such havoc would soon be so nearly exterminated as to be practically harmless. And this would be an improvement of about fifty per cent in the quality of the fruit produced. I know that many more farmers who own little orchards would spray them if they fully understood how to go about it and knew how quickly it can be done. Last fall a farmer who two years ago sold nearly six hundred dollars' worth of apples from his little orchard came to ask me if I thought it possible for him to spray the trees himself next spring, and how it should be done. After I told him that nothing was easier, what to use and how to go about it, he asked me if I was sure that was the right way. He said he had always thought it was a big task and that only an expert could do the job properly. The fact is, so many writers have made it appear to be such a mysterious and enormous task that very few have felt that they were quite equal to it.

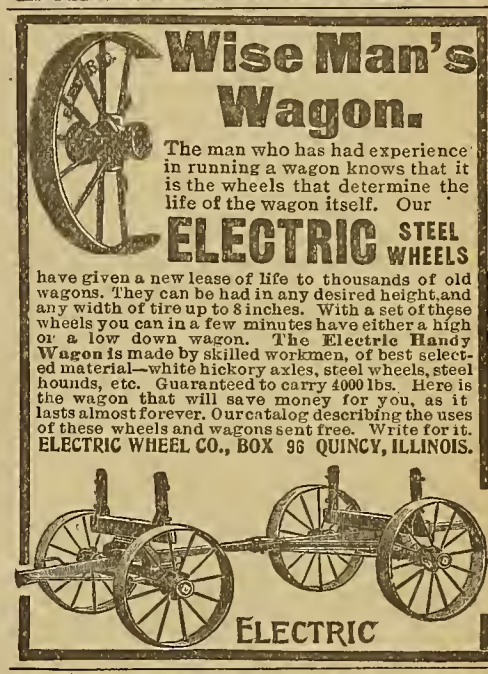
The first thing needed is spraying apparatus. If one has a large orchard a good outfit is the cheapest in the end. An investment of twenty or twenty-five dollars in a thoroughly good, strong, durable pump and other necessaries will pay well. Spraying a large orchard with a little cheap outfit is much like trying to bore a large hole with a small auger. Get an outfit with which you can do the work thoroughly and quickly. If the orchard is small—ten to thirty trees—a small outfit will do well enough. The force-pump style of sprayer with an eight-foot bamboo extension is the outfit one can rely on. Then one needs a barrel with a close-fitting cover so arranged that it can be fastened down to prevent the liquid from slopping out. Put the barrel on a sled made of planks, hitch a horse to it, and draw it about wherever it is wanted. In large orchards a wagon and team must be used for hauling the stuff, but for small farm orchards a small sled and one horse are all right.

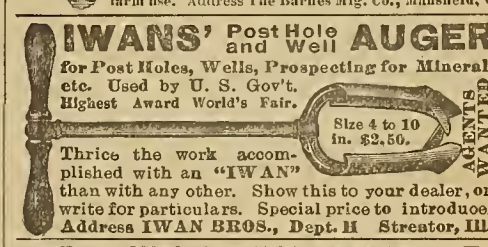
Make it a point to spray twice. If you spray twice every year you can rest assured you are doing well. Though the effect will not be astonishing the first year, there will be a marked improvement in the healthfulness of the trees and the quality of the fruit, and this improvement will increase for several years if you are faithful. The first spraying should be done just before the leaf-buds open. Don't put it off until they begin to open, but do the job before they begin. This spraying is to kill the fungi, scab, etc., which are lodged on the branches and leaf-buds waiting to attack the leaves as soon as they appear and then move on to the fruit. Destroy this fungi before it becomes active, before it fastens itself to the young leaves, for then it cannot be destroyed without destroying the leaves also. For destroying this fungi use one pound of sulphate of copper in twenty-five gallons of water, and wet every inch of the tree thoroughly.

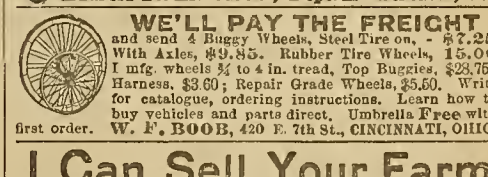
The second spraying is for the insect-pests that attack the fruit, and for this purpose Paris green or London purple is used. We have had the best success with Paris green. Mix one half pound in a pailful of water, stirring it until every particle is thoroughly wetted and mixed with the water. Add to this one hundred gallons of water. Spray the trees with this just after the blossoms have fallen, and be sure that you wet every leaf and every young apple thoroughly. If you have time repeat this spraying ten or fifteen days later, and add one fourth more water to the poison or it may injure the leaves. If you do a good job in the first spraying, and have no heavy rains soon after, most of the pests will be destroyed. If a heavy rain falls soon after the job is done it should be repeated, and usually it can be done while it is yet too wet to work in the fields. With a horse and sled, a barrel and a good sprayer one can spray a small orchard so easily and quickly that he should be ashamed to leave it undone.

FRED GRUNDY.

Four things a man must learn to do
If he would make his record true—
To think without confusion clearly;
To love his fellow-men sincerely;
To act from honest motives purely;
To trust in God and heaven securely.
—Henry Van Dyke.







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OUR FARM

Farm Theory and Practice

A Deep Soil.—How deep may we make our soils with profit? This is a hard question to answer on most farms, I think. We are ready to do that which will pay in good cash. It is for this we farm. I know one owner of several large farms who makes the depth of his soil twelve inches, having broken up about four inches of rather intractable subsoil—partly hard-pan—to get this depth. He uses three heavy horses in breaking, and cuts a narrow furrow. In this way he gets the depth. I have always been inclined to think that the depth of plowing should depend upon the percentage of organic material at hand. The soil we work must have a certain amount of this to keep it in good heart. The deeper we plow and the more soil we stir, the greater must be the amount of vegetable matter on hand to mix with it.

In the case cited the proportion is maintained. The plowing is very deep, but lime is used to force immense growths of clover, and thus the soil is supplied with humus. The clover hay is not fed closely, much of the coarsest going with the stable manure back to the land. The growth of roots is very large, the clover yielding two to two and one half tons an acre. The lime started the clover, and the clover made deep plowing safe, and in turn the deep plowing doubtless made the clover better. That man has as big a percentage of humus in his twelve inches of plowed soil as most men have in seven inches of soil. I do not believe that it follows that the plowing should be so deep on most farms. If the humus-making material is not at hand, it may be that the plowing is now deep enough. The right thing to do is to deepen gradually, but at the same time we should increase the supply of vegetable matter.

Four Crops of Hay.—One result of this deep plowing and liming and free use of clover and manure is the ability to get four rather heavy crops of hay in succession. The rotation covers seven years, giving four years to grass. The first year the crop is clover, the second it is mixed hay, and the third and fourth are timothy. This indicates the unusual thriftiness of the clover. The manure is plowed under for wheat, and down in that twelve inches of manured soil the grass-plants find enough fertility to feed them profitably for that long mowing term. What will be the outcome? I think in time the lime will lose its power to affect clover-growths so much that the clover will diminish and the rotation will be shortened or the timothy will be fed on the farm. When the sods cease to be as heavy as they now are the plowing may diminish in depth. The wisdom of changing the depth under such circumstances is the question that puzzles.

The Furrow on Edge.—It is to be borne in mind that when this manure is plowed under it is not buried in the bottom of the furrow. With very deep plowing, having the furrow-slice narrow, the sod is turned on edge more perfectly than in the case of shallow plowing. The sod and manure are left distributed through the soil, and the surface has a fair share of them. When sod is turned deep and flat the material that is needed to keep the surface-soil loose and friable is buried too far below. When a sod is turned shallow for corn it is in reach of the harrow and cultivator, and the surface gets its share. The plow that runs deep should cut narrow when sod-land is broken, or the surface-soil will be robbed of its share of the material that keeps it friable.

Effect of Lime.—A good liming of land that has never had such a dressing rarely fails to stimulate a growth of clover. The result in hay sections is an inclination to mow too long. We feel safe when clover does well, but it should be borne in mind that this effect of liming decreases, as applications continue to be made for a long period of time, if the clover is not returned in the form of manure, and if the sod is not broken after the second or third mowing—preferably the second. But even under the most favorable conditions I think there is abundant proof that lime finally loses much of its power in bringing clover, and that it is the tendency of this legume to become less trustworthy as it becomes one of the old crops of the land. This is certainly true where manure is not freely used.

It does not follow that lime should not be used. I believe its use should be extended over vast areas where clover is now disappointing farmers. If an application will help to get good clover-sods, then the thing to do is to build up fertility with the clover, and not to use up all the fertility in growing timothy for market. Lime frees potash in the soil. It also sweetens a sour soil. With comparatively heavy applications of lime the physical condition of heavy soils can be improved. All this is an aid to clover. The application to free potash and to sweeten a soil need not be large. When lime will thus benefit clover its use is profitable. The caution is only that one must not expect lime to continue indefinitely to give the marked results so often apparent at first. Clover and manure should be used to feed limed land, or soil-poverty will finally come.

David.

Tobacco-plant Beds

The plant-bed used by Northern tobacco-growers is not really a hotbed, but a cold-frame, and is constructed as follows:

Select a piece of fertile ground as free from weed-seed as possible, about five feet wide and the desired length. Around this construct a frame of one-inch boards, ten or twelve inches wide, sinking them a couple of inches in the ground, leaving eight or ten inches above the surface. Then, commencing about two and one half feet from either end, drive a row of stakes four or five feet apart through the center of the bed, letting them stand about six or eight inches higher than the boards around the edge. Nail a strip one by two inches along on top of the stakes, and cover the frame with good heavy muslin. Sew loops along the edge of muslin about one foot apart. These loops can be hooked over nails driven in the sides of the boards. This construction will give all the protection necessary for the plants.

The soil should be made perfectly fine and smooth on top. Sow the seed broadcast. Sow slightly thicker if you set with a transplanter than if set by hand, so that the plants will grow higher and have a longer stem. The bed must be kept free from weeds. By making the bed narrow it allows one to reach the center from the edge of the bed. Care must be taken to keep the plants sufficiently moist, but too much water will rot them. If you wish to hurry the growth water the plants with manure-water, chicken-manure being as good as any. If fleas get in the bed, they can be disposed of by scattering corn-meal mixed with Paris green over the bed. When the plants get large enough to transplant they should be hardened by removing the cover on nice days, leaving it off more and more until the plants are ready to use. About forty feet length of bed is not too much an acre. If enough plants are not furnished at the first pulling the bed should be at once thoroughly soaked with water and covered with canvas to bring on the small plants remaining. Care and common sense cannot be dispensed with.

C. E. Jackson.

New York Dairymen's Convention

Prof. H. Wing, of Cornell University, gave an address on "Some Results in Feeding a Herd of Poor Cows." He said that recent experiments had shown that food has a greater influence on the quality of the milk than was formerly believed. He gave the results of an experiment made at Cornell University in feeding a herd of poor cows. They were fed all the rich milk-producing food they would eat to learn how much the milk could be increased in quantity and improved in quality. When the herd was first taken they were each giving about fifteen pounds of milk a day as the average. This was in March, 1900. The cows were fed during the whole of the first summer at the farm where they were bought. All the food was obtained from a poor pasture. At this time the milk was costing the owner one dollar and three cents for each one hundred pounds, or more than it sold for. We purchased ten cows, and they were taken from the herd as they would average. The cows were taken to the station in November of the first year, and all were fresh in milk soon after. The cows were fed for two years—1900 and 1901. Some of the lessons learned were the value of individuality in these animals; that the cow is a law to herself; that it would pay the farmer to watch individual cows and know exactly what each one is doing. The gain of the whole herd in 1901, when the ration was increased, over 1900 was about fifty per cent. This was the average of the herd, but some cows made a much larger gain. Some of the cows gave but small increase in milk or fat, but the increase was due to the fact that a few cows responded to liberal feeding. Ten pounds a day was all that could be fed some of the cows with an increase in milk. When the grain ration was increased to fourteen pounds there was no increase in milk or fat. Other cows gained in flesh when the grain was increased, but with small increase in milk. The cows were mixed breeds. The extra feed given the cows the second year was not fed with a profit for the whole herd, but only for a few of them. Experiments have shown that many cows will not respond beyond a certain limit of increase in the food.

The Hon. W. D. Hoard, editor of "Hoard's Dairyman," next addressed the meeting on the subject "Improve Your Methods and Increase Your Profits." He said the great hindrance to progressive dairy-farming lay in the fact that so many dairymen are not teachable. He quoted the words "the truth shall make you free," and said they applied to the dairy situation to-day. Also quoting man should earn his bread "by the sweat of his face," he said they meant the sweat or exercise of man's brain. One source of his knowledge was gained by his connection with the eight hundred patrons of his creameries, and his observance of their methods as they wrestled with the problems of the dairy. He had seen one man in the same creamery getting one hundred per cent more profit than his neighbor.

There is a great difference in cows, but there is a greater difference in dairymen. We need an improved breed of dairymen as well as cows. Many dairymen are too conservative. They will not change their methods when they know they are making no profit. They do not take advantage of the opportunities offered to them to learn. They have turned their backs to the means of a dairy education that is being extended to them. We do not find them crowding the halls where dairy conventions and farmers' institutes are held. They do not read dairy papers and books. They say they have no need of them. Dairy education need not cost much in these times. The question is, "Do you want it?" Farmers with means are afraid to send their sons to the agricultural schools, fearing they will be spoiled for the farm. Farmers need to be educated so they will understand the value of breed over feed, how one cow will give a profit when fed a good ration, and another will not, and how much depends on the individuality of the cow. They should work to secure quality in breed by a wise selection of the sire. Stick to the breed that is adapted to your purpose and which suits you. Do not mix breeds.

For the dairyman who studies to improve his methods there is a bright future. The future of dairying lies wholly in one proposition, Can a farmer make a profit at it? If he can, then the future is bright. The question of whether he can make a profit or not depends more on himself, his knowledge, his skill and whether he is a well-posted dairyman than any other thing. Run the price of butter down to sixteen cents a pound and I will show you men who will make it for ten cents. Let it go up to fifty cents and I will then show you men who will then make it cost all they get.

Referring to the creamery patrons' investigation in New York State, he said that twenty-nine only of these hundred men read dairy and agricultural literature, and, strange to say, in every instance those that did the most reading and made the closest study were the ones that made the largest profit. Think of it in these enlightened days, and in the great dairy state at that! Seventy-one per cent of one hundred dairy-farmers reading no dairy literature whatever.

At the evening session Hon. William Grout, of Barton, Vermont, the man who has been fighting to protect the butter interests of the country against oleomargarin, and author of the famous Grout Bill before Congress, was the first speaker. His subject was "Oleomargarin Legislation." He stated that the sale of oleo had grown to enormous proportions. It exceeded one hundred million pounds in 1899. He said oleomargarin is a great fraud, as it is sold as a counterfeit for butter and as butter. In most cases it is actually stamped as butter. It is colored like butter, and takes its place, to the detriment of the dairying interests of the country. No one objects to the sale of oleo if it is sold for what it is—oleo, but it is a fraud when colored like butter and labeled as butter. Sold for what it is and upon such merits as it has, without coloring and without disguise for butter, no one will complain. To compel its makers to place it in its proper and true light before its buyers and consumers is the purpose of the legislation he espouses in the interest of the honest makers of butter. If oleo is in demand, if people want it, let it be sold for what it is, and at a price commensurate with its cost, and not disguise it as a product of the dairy and sell it as butter. Last year twenty-five million dollars' worth

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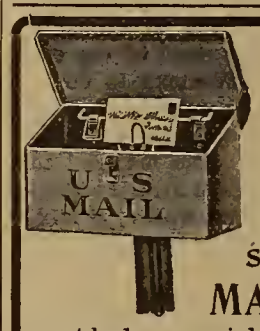

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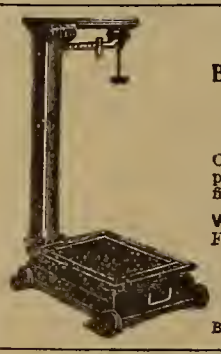

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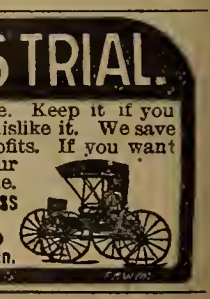

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—the kind which brings the highest price in any market can only be made from perfect milk. All bad odors and flavors of animal, feed or stable must be removed.
THE PERFECTION
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of oleo was sold. Of this amount three fifths was a clear profit to the manufacturers. The Grout Bill proposes to check the sale of colored oleo by taxing it ten cents a pound. "I am satisfied the only way to stop its fraudulent sale is to take away the profits. The bill, I think, will pass the present Congress, but every dairyman should ask his representative to support it."

Lillian Wilson, of Demark, Maine, gave an interesting talk on "The Use of Dairy Products in Our Cooking." She gave reasons for cooking milk before using it. Milk should be heated over hot water, but to not more than one hundred degrees Fahrenheit. It can be used to great advantage in bread and puddings. Skimmed milk can be used with corn-meal to make the well-known "Boston brown bread." Cream should be used plentifully by the farmers, as it is one of the best concentrated foods. Cooked cheese should enter more largely into our diet, but should only receive moderate heat. Dairy products can be made to take the place of meat with economy.

Professor Roberts, of Cornell, read a paper, "How May the Profits of Our Dairies be Increased?" He said profits in the dairy business are not satisfactory. Men who care for cows are not getting good wages for their time. The margin between cost and production is too small. He attributes this condition in a degree to carelessness and bad management. One half the cows in the state are not paying their board. Poor cows burden the farmer, like poor machinery.

Edward VanAlstine, of Kinderhook, N.Y., gave some results brought out by the "Model Dairy" at the Pan-American Exposition. The test showed that there are good cows among all, but the Channel Island cows made a pound of butter cheaper than any other breed, and also made the best quality of butter. If one wants to make milk at the smallest cost a quart, then the Holsteins and Ayrshires will do it. It was learned that the profits in dairying do not consist in the gross amount of milk a cow gives, but the milk that is made the most economically. It was found that in most instances ten pounds of grain was all that could be fed with a profit. Also that with the silo one can make milk as cheap for the six months of winter as for the six months of summer.

Doctor Jordan spoke on commercial cattle-foods. He said most of the cattle-foods are adulterated, particularly those made of wheat bran and corn-cobs, corn and meal and oat-hulls. He said the remedy is in raising your own feeds.

An address by Ex-Governor Hoard concluded the program. He gave the results of his experience in growing and feeding alfalfa. With alfalfa and ensilage he was able to reduce the grain ration to four pounds a cow, and obtained as much milk as when feeding eight pounds of grain a cow with thirty-five pounds ensilage and oat hay. The convention took emphatic stand in support of the Grout Bill. W. H. J.

Three Dollars to Ninety Dollars an Acre

The big drainage-ditch which runs through Mason and Tazewell Counties, Illinois, and which was begun fifteen years ago, is practically completed. It is being paid for by taxing the property benefited. About fifty thousand acres of land have been reclaimed from the swamps, and are now among the most fertile in the state.

For years the land from Crane's Creek south of Delavin was little better than a swamp. It was the home of wild geese and nearly every kind of wild fowl, and hunters waded through it or went out in boats in all directions. Now one hundred bushels of corn to the acre is not an uncommon yield on this land. Two main ditches, each twenty miles long, traverse this district, and there are many small laterals. One of the large ditches empties into Quiver Creek and the other into the Sangamon River. Before this land was drained it was valued at three dollars an acre; now it is worth ninety dollars. The last bond has just been paid off, and in the future nothing but the expense of repairs necessitates further outlay.—The Drainage Journal.

Pasturing Spring Grains

Spring grains, such as wheat, oats and barley, may be greatly benefited by pasturing with sheep. When a crop is so rank that it lodges, and especially when it is so rank that it lodges before the ear appears, the yield of the grain is greatly reduced, the straw being abnormally strong, the yield will be less than it would be if the growth were not so rank. Pasturing may be made so to regulate the growth that the straw will not be excessive.—Prof. Thomas Shaw, in the American Sheep-Breeder.

To the Rescue of Worn-out Lands

The unproductive pasture and meadow lands of New England are in no sense worn out and exhausted. They are not dead, never to be revived again. Their returns are small simply because they lack care and attention. Stir them up, get air through them, and then add some available plant-food, so plant life can get started. They will then quickly change from their unproductive condition, and give satisfactory returns.

All things considered, New England is one of the best hay-raising sections of the whole country. Much of these lands are giving good returns with neither artificial feeding nor care. Think what they would surely do were they handled in a business-like way. The New Hampshire College farm is one of the most vivid examples of what skill, science and care will do in the way of rescuing worn-out lands. When the college was moved to Durham the farm represented one of the most depleted and broken-down farms in the whole New England district. But twelve tons of hay were cut that year. It required some time to produce enough forage for the small number of animals kept. But what a change in a few brief years! The past season finds every field on the old farm under cultivation and newly seeded to grass, and two large barns filled with hay and corn to overflowing, and eighty head of cattle and horses supported, besides a large number of hogs.

How was this done? By tillage, crop rotation, manures and fertilizers. What was done for the improvement of that farm is possible for every farmer in New England. The first step is tillage—thorough tillage at that. Chemicals and crop rotation will not show their full value unless good tillage is followed.

Soil must be stirred up and filled with air. This practice will improve the physical condition of the soil, and changes the unavailable, unassimilatable plant-food into available plant-food. It loosens the soil; it puts life in the soil; it makes a comfortable home in which the plant may grow. Then crop rotation adjusts the different plants to the environments of their food. Finally, chemicals supply the needed plant-food to get a good and vigorous growth from the beginning. We have found it advisable in bringing up the farm of the New Hampshire College to add the following chemicals just before sowing: Muriate of potash, one hundred and fifty pounds; nitrate of soda, one hundred pounds, and acid phosphate, two hundred pounds, to an acre. This mixture was scattered broadcast, then harrowed in, followed by the crop seed.

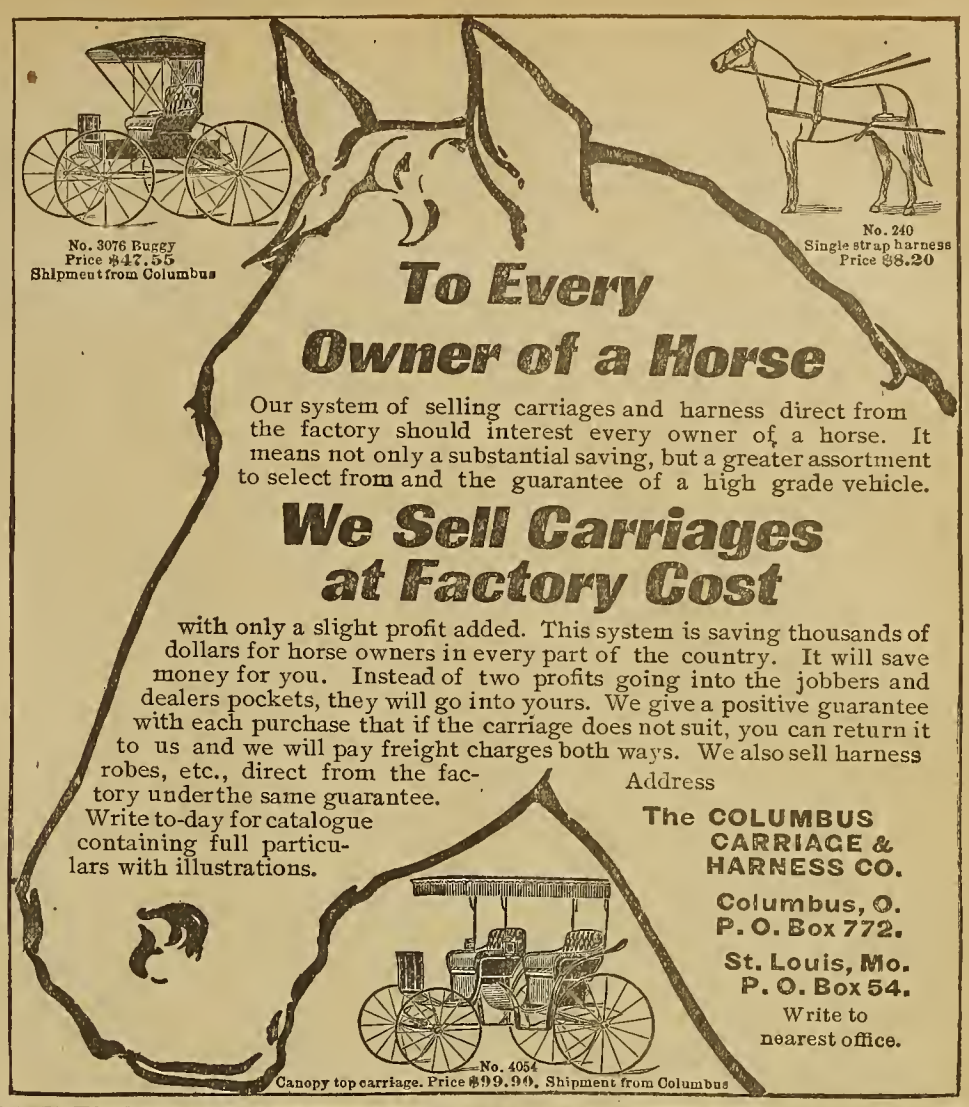
One favorable season the yield was increased from less than half a ton of hay to the acre to more than three tons. An eight-acre field three years ago was treated in this manner by fall and spring seeding, and the following summer twenty-two tons of timothy and clover hay were cut. The last summer a trifle less than twenty-four tons were harvested. Other fields were treated in a similar way. In every case the yield has been doubled and trebled by tillage and fertilization.

Does it pay? Nothing pays better than when hay sells for fifteen dollars to twenty dollars a ton. The expenditure of ten dollars an acre for labor and fertilizers will be returned in a single year, with a profit of as much as twice what was originally spent, and then for four or five years everything is profit excepting the cost of harvesting the crop.

Let us not forsake the old lands, then. Let us go to their rescue. Plow them, disk them, harrow them, and then when a good seed-bed is obtained add the fertilizers suggested above, and sow the grass-seed, and the lands will do their part. I have unbounded faith in the New England soils, and if they are intelligently handled they will be a valuable birthright of thousands of New England boys and girls.—Charles William Burkett, in the American Cultivator.

Cost One Cent a Pound

O. S. West, Paullina, Iowa, breeder of Duroc-Jerseys, has made the statement, which some other breeders have challenged, that he produces his pigs in a usual-priced grain year, when mill feed can be purchased for twelve dollars a ton, for one dollar for grain feed for a hundred-pound pig. Of course, he gets all out of grass and pasture that he possibly can, which is not counted in the expense of growing the pig. He has a rye pasture, barley pasture, has clover, blue-grass and rape, but the expense for grain fed to produce a hundred-pound pig is only one cent a pound. Here is a good example for some one to copy after.—American Swineherd.



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Notes From Garden and Field

Insect-poisons.—It will soon be time again for using poisons to kill all sorts of injurious insects. The first application I have to make usually is on my fruit-trees, to prevent the ravages of bud-worm, cigar-case bearer, etc., and to be effective the applications must be made very early, or as soon as the buds begin to open, and repeated soon after. Paris green has for many years been my main reliance as an insect-poison. If pure and properly used it is reliable enough and harmless to the foliage. I have always preferred to apply it in liquid form, and if used in this way the addition of lime surely prevents injury to the foliage, liable to occur through the action of the free acid in the Paris green. For two or three years, however, I have used green arsenoid in place of Paris green, and always had very satisfactory results from it. This newer poison is lighter than Paris green and stays in suspension in water, requiring far less "constant stirring," and besides is much cheaper. So long as I can get such results from the arsenoid I shall use it in preference to Paris green. But where the latter (being more available in most out-of-the-way places) has to be used there is need for caution in order to get the pure article. Some of the samples of Paris green on the market are reported to be badly adulterated, and if this is the case best results cannot be expected from their application, and much loss of labor may be caused thereby. Be sure you get a genuine article. You may make your purchase now and test it, or have some expert test it. In New York State the Geneva Experiment Station, I believe, offers to test any sample sent to it, free of charge. But each buyer and user of Paris green may just as well help himself. Pure Paris green dissolves perfectly in strong ammonia, giving a beautiful clear blue liquid. Put a little Paris green in a vial or small bottle, pour a little strong ammonia over it, cork it up and shake up well. If the clear blue liquid is obtained without mud-colored sediment you may be sure that the Paris green is all right.

What to Plant Next.—One of the things that I always try to start quite early in the greenhouse or hotbed is the egg-plant. I notice this year that many of our seedsmen offer a "new tree egg-plant," giving an illustration of a nice upright-growing bush, well loaded with beautiful, even-sized and perfectly shaped eggs. The trouble is that Nature and the artist work on different plans and after different ideals. I sowed some seeds of this "tree egg-plant" last year, but it proved to be of rather inferior vitality or germinating power, and although I succeeded in getting two or three plants, they got mixed with the Improved New York Purple and did not show any marked characteristics so as to make themselves prominent among the others. But what better egg-plant can there be desired than our improved New York Purple? Surely the fruit is large enough. The specimen from which I selected seed last fall was simply immense, weighing over ten pounds. And when we give to the plant the right kind of soil (warm and very rich) and good cultivation it develops into a nice little bush that will give a dozen or two of fine eggs during the season. And if we want a bush for ornament it also fills the bill for this purpose, as it has a decidedly tropical appearance. For the extreme North probably the earlier, smaller-fruited sorts, such as Early Long Purple, may be more desirable. But here—and our seasons are short enough, too—I can have a full supply of eggs for several months, and altogether a profitable crop even for market. It is chiefly a matter of getting the plants started reasonably early, and of pushing them right along by good care and feeding to their fruiting stage. I prefer strictly fresh seed or that is at least not over a year old. It soon loses its germinating power, and in order to make it germinate promptly it needs a warm place. The soil in the flat, box or pot should be quite fibrous and very rich. In a warm hot-bed seed will germinate in ten days' time, and the plants make good progress, so as to be ready for the first transplanting in three or four weeks. My plan is to sow broadcast in flats, and set the flats for a week or more upon a bed of heating horse-manure (mostly clear droppings) or upon the hot-water pipes under the benches. The bed of horse-manure, prepared as for a mushroom-bed, but with the manure not packed quite so solidly, is the better device, as it keeps the soil in the flat moist much longer than in flats placed upon the heating pipes. When the young plants begin to appear above-ground the flats are placed upon the bench in the light, and the plants kept in good growth right along. When two true leaves have appeared I transplant promptly, setting each plant separately into a small flower-pot or one of the wooden plant-boxes (four to four and one half cube) offered at about two dollars and twenty-five cents for one thousand in the flat by fruit-basket firms. I prefer the plant-boxes for small or modest operations, although for growing egg-plants on a large commercial scale small flower-pots take less room, cost but little more than the plant-boxes and will last for years, while the wooden plant-boxes are one-season affairs only.

Early Tomatoes.—Early tomato-plants are started much in the same way as egg-plants, although the seed does not require the same high temperature within ten degrees to germinate. In a warm hotbed the seed will come up in a week's time, and I have no trouble in making seed grow promptly when sown in rows in the ordinary greenhouse bench when the soil-temperature is about sixty degrees or above. I find that for early sowing in a greenhouse that is kept rather cool, as for lettuce-growing, I can get a few extra degrees of soil-temperature by putting even a shallow layer of fresh horse-droppings into the bottom of the bench and the good surface-soil on the top of this. In fact, I prepare most of the benches in the greenhouse in this way. The layer of horse-droppings may not be over four inches deep, and the surface-layer of fibrous loam two inches, making the entire depth of the bed six inches. The several degrees of additional heat I thus procure at a time when I can just manage to keep the greenhouse fairly comfortable, with an outside temperature of near the zero-point and the west wind raging and howling, will help greatly to insure safety and continued thrifty growth of my plants. The chief factor in giving early tomatoes is the age of plants. We must start the plants early or we will fail. I have never been able to make up by means of pushing the plants along rapidly, by high feeding or giving extra heat for the loss of time occasioned through late seed-sowing. If we start the plants early we may grow them along rather slowly and stocky, and this is better than to stimulate them into a succulent and tender growth. All we want is the age of plant. When the time of fruiting approaches we can soon get the plant to spread out, make branches, bloom and set fruit. T. Greiner.

Orchard and Small Fruits

CONDUCTED BY SAMUEL B. GREEN

Inquiries Answered

Insect Eggs on Twigs.—S. W., Quincy, Ohio. The twig which you inclosed is not infested with red mite, but what you take for mites are eggs of some borer, although not of the true beech-borer. I am not able to identify these eggs to my satisfaction, but do not think you have anything to fear from them.

Comet Currant.—C. H. W., Conneautville, Pennsylvania. The Comet currant is a new thing under the sun, and as yet I have not had a chance to become acquainted with it. I have an idea, though, that it is very likely that it has been praised too high, and would suggest that if you decide to try it that you go into it in a small way at first.

Cranberry Settings.—G. P. J., Butte Meadows, Cal. You can obtain cranberry settings from any of the Eastern raisers of cranberries. As to methods of growing cranberries I would suggest that you write to the Orange Judd Company, of New York City, for a little treatise which they publish on this subject. Among nurseries who can supply you cranberries are the following: Lovett & Co., Little Silver, New Jersey; Clark Tuttle, Baraboo, Wisconsin; Ellwanger & Barry, Rochester, New York.

Mulching Young Fruit-trees.—M. L., Pleasantville, Iowa. Young peach and plum trees are improved on most soils by mulching, but sawdust is rather bad stuff to work into the soil, especially pine or spruce sawdust, as it seems to sour the land. Hard-wood sawdust, however, is not especially injurious, and might be used for mulching peach-trees with good results, but I should not want to use it in large quantities. If the sawdust was decayed it could be used to good advantage, but I should not want to mix it with the soil until it was very rotten.

Northern Fox and Frost Grapes.—D. K., Farmer, S. D. The Northern Fox grape is the parent of the common purple and white grapes with which we are most familiar at the North. Of these the Concord is a good representative variety. This grape is scarcely found as far west as Minnesota, and I think not at all in Dakota. It is, however, very common in the states east of Lake Michigan. The fruit is fully as large in the wild state as when cultivated, and is generally of a purple color. The River Bank grape is the common river grape of your section, and is common in Minnesota and parts of Dakota, Iowa and Nebraska. It is small, hardy, sour, and is known oftentimes by the name of Frost grape. I do not think of any one who offers this for sale, and there are very few varieties of it that are adapted to cultivation, and none that are propagated in any quantity. There have been some hybrids made between this and the Fox grape, among which are the Janesville and Beta. These latter are a great improvement over the common wild Frost grape, but are not as good in quality as the Concord. They are, however, much hardier and better adapted for planting in severe locations.

Anthracnose.—R. C. L., Spring Valley, Minn. The pieces of the canes of Louden raspberry which you inclose, and which have dead spots on them surrounded by purplish rings, are affected with what is known as anthracnose. This is a very common disease of raspberry, and is sometimes so severe as to occasion serious loss. It more often injures blackcaps than red raspberries. Its damage is not apparent the first year of the growth of the cane, but it spreads rapidly the following season, especially at the time when the fruit is ripening. We have more or less of it every year, and this year less than for some time. From our experience here I doubt very much if your Louden canes are sufficiently injured to cause any serious loss, as this variety has seemed to be quite resistant to it. The best treatment is to spray the canes in the spring, before the leaves appear, with Bordeaux mixture of double strength—that is, five pounds of sulphate of copper, five pounds of lime and twenty-five gallons of water. This covers the old canes and prevents them from sending off their spores, and thus prevents the affection of the new growth. The disease is confined to the canes, and you need have no fear about setting out a new plat with these plants, but I would suggest that you cut off the whole of the cane and set nothing but the roots.

Liquid Grafting-wax — Wild-plum Stock — Blight — Grafting the Plum — Wheel-hoe.—C. K., Minnesota. Liquid grafting-wax for which you give the receipt I do not know about. I should think that it ought to have some beeswax in it to make it work well. I am cautious about dressing our grafts with any new kind of wax. For instance, last spring we thought we had really got hold of a desirable thing in the substitution of paraffin-wax for beeswax, and on the recommendation of a large nursery concern we used it. But the results were not so satisfactory as when we used our old reliable beeswax. We have sometimes used alcoholic wax, but I think never for top-grafting. I have friends, however, who like it very much.——Wild-plum stocks (P. Americana) are popular for grafting in Minnesota, Iowa and Wisconsin, and there is a good demand for them. A short time ago a friend of mine sold five thousand for fifty dollars, and another five thousand for forty dollars.——I am inclined to think that where the Yellow Transparent does not blight badly that it is a most profitable and very early apple for Minnesota; but it has not generally been profitable in this state on account of its liability to blight. The Breskovka is less susceptible to blight than the Yellow Transparent, but the fruit is not of as good quality nor does it take on such an attractive yellow color. I doubt very much if we have any early apple that for real use is ahead of the Duchess of Oldenburg for Minnesota.——Plum-trees may be top-worked by grafting in the spring very successfully, and it is a very general practice in your section. I prefer it to budding. For this purpose use either the whip or the cleft graft, but one must take especial pains to do the grafting very early. For the scions use those that are cut in the spring. It is found that scions cut in the autumn are liable to have been injured and lost some of their buds, so that they start poorly, although they may be fresh and green in appearance.——The wheel-hoe is a very desirable tool for some lines of nursery work; for instance, the cultivation of small seedlings before they are well rooted in the ground. After they are well established I generally prefer to use the horse-cultivator.

Grape, Currant and Gooseberry Cuttings.—S. B. M., Bloomington, Illinois. Grapes are rather difficult to propagate from cuttings unless one has had some little experience, and I generally recommend beginners to grow them by layering, which is very simple. To do this successfully the new growth should be bent to the ground and covered for about one foot of its growth in the middle of the cane with four to six inches of soil. Treated in this way such branches will generally have a good root system by the time the leaves fall, when they may be taken up, cut into two parts and treated as small, separate plants. Currants are best grown from cuttings made early in September or any time after the leaves fall. They may also be made up later in the autumn or even in the spring with very good results. They should be made about eight inches long and preferably of the new growth. They should be planted out seven inches deep in good, rich, heavy soil, setting the cuttings about four inches apart in rows three feet apart. Great pains should be taken to firm the soil carefully around the cuttings so that they cannot be easily displaced. On the approach of winter cover the cuttings with a mulch of well-rotted manure about two inches deep to prevent their being thrown out of the ground by frost. With this treatment it will be found that the cuttings are rooted before the winter sets in, and they will make a strong, vigorous growth in the spring. Gooseberries do not grow easily from cuttings in the Northern states, where they are best grown by layering. This consists of bending the branches to the ground the latter part of June or the first of July and burying a piece of the new growth for about six inches. Many small shoots that grow upon the branches will then produce roots, and they may be cut apart in autumn, when, if they are rooted ever so little, they will grow the next spring if planted out and treated about as for cuttings set in the spring.

Japanese Climbing Wonder

This discovery in tomatoes is a *perfect wonder*, and the most magnificent in America. It is new to American people, and every one who grows tomatoes should have it. At enormous expense I secured a quantity to offer this spring. It is very early ripening in Canada, large perfect fruits, beautiful red color, very solid, and few seeds. If you once get seed you would not take $5.00 for it, because it must be grown to be appreciated. You cannot obtain this seed elsewhere.

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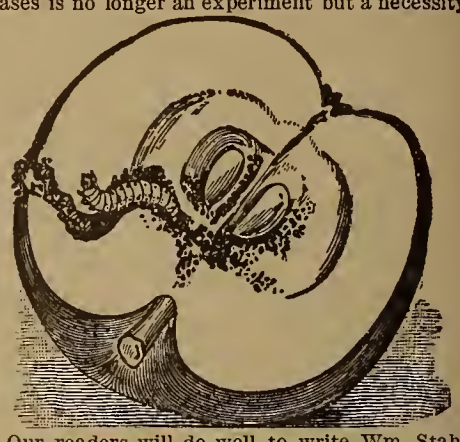

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THE POULTRY YARD

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Value and Constituents of Eggs

IT MAY not be out of place to again mention that for the production of eggs the food should contain an ample supply of those ingredients that make up the eggs. An average egg weighs about one thousand grains, divided as follows: Shell, one hundred and seven grains; white, six hundred and four grains; yolk, two hundred and eighty-nine grains. The shell is composed of ninety-seven per cent of carbonate of lime and one per cent of phosphate of lime and magnesia, and the yolk of fifty-four per cent of water, twenty-eight per cent of oil, three per cent of mucus, one third per cent of salts and twelve per cent of albumen. Therefore, a food containing albuminoids and fat should be employed. The natural food of the fowl consists of insects, seeds, vegetable matter, etc. There should be a variety of grains, animal matter in the form of scraps of meat or pressed scraps, chopped cabbages, apples, etc.; or, as has been practised, finely cut and steamed clover hay. Compared with pork a hen may be estimated to consume one bushel of corn yearly, and to lay twelve dozens (or eighteen pounds) of eggs. This is equivalent to saying that three and one ninth pounds of corn will produce, when fed to one hen, one pound of eggs. A pound of pork requires about five and one third pounds of corn for its production. When eggs are twenty-four cents a dozen and pork ten cents a pound we have the bushel of corn fed, producing two dollars and eighty-eight cents' worth of eggs and but one dollar and five cents' worth of pork. Some eggs will weigh two pounds or more a dozen. The figures given are simply estimates.

Barn-yard Arrangements

The fowls that remain in the barn-yard should be given attention, and not be forced to depend upon circumstances. The house and yard allotted to the laying hens should be dry, but airy, and sufficiently capacious to hold the fowls with comfort. Good roosts should be provided. In the formation of nests, they should be so constructed as to be easily removed and taken outside, to facilitate the operation of cleaning. Before placing a sitting hen on a nest have the nest taken out, well cleaned and whitewashed inside, which operation should be repeated as each hen hatches out her brood, and the nests should often be renewed with clean hay or staw. Birds that have access to the stock-yards, barn and stables, where they satisfy their appetites as often as they please, will need no other food in summer. By penning them up one will really know what they may consume, as well as its cost. By confining the fowls the ground would not be lost to culture at all, as fruit-trees, especially plums, could be planted therein, the product of which would more than pay for the use of the ground. Placed in such a situation the trees would hold and ripen their fruit, because from the natural insectiverous propensities of poultry but few of these insects which prey upon some fruit-trees would escape them. If fowls have the run of fields and barn-yards they should have their quarters separate from the other buildings.

Economical Feeding

Feeding the fowls in winter can be done more economically with a variety of food than by using only grain. It is a fact that a hen will eat the same food that a cow will. If clover hay is cut very fine and scalded the hens will relish it. They will also eat ensilage, and when finely cut beets, carrots or turnips are given them they readily accept such foods. Bran, gluten-meal, linseed-meal, etc., may also be allowed, as well as ground bone and meat. Fed on a variety, the fowls will keep in a good condition and lay during the cold weather.

Care of Early Pullets

All poultry-keepers should endeavor to raise early pullets to produce in the following fall or winter when eggs are scarce. If pullets are to be hatched, the eggs to produce them should be incubated as soon as possible. All chickens intended for early laying should be fed extra well and pushed along as quickly as possible, using sound, plain foods, as much as they will eat. The houses should be attended to, for pullets allowed to care for themselves will not make early layers. The chief points are to keep them warm at nights, to have them take a fair amount of exercise during the day, to give them the proper kind of food, and they should be from good laying hens. Some breeders attend well to the birds in the chicken stage, but when the pullets are near maturity they get careless, supposing that their duties are over and that they only have to wait and collect the eggs. This is good food and labor lost. To have good pullets that will grow into good hens and make prolific layers the best care must be given from the time they are hatched until their combs turn red. The poor ones should be sold. Retain only the finest and largest. It is not necessary to feed a hundred to get fifty good ones. Keep the best. They will give more profit than twice the number of inferior ones.

The Laying Hens

Many persons who have had the care of a large flock become disgusted because only a few eggs are secured, and condemn all, when in reality there are some excellent producers in the lot, the loss being due to those that are either too young, too old, sick or overfat. The best plan under such circumstances is to pick out the laying hens and give them a separate apartment, so as to feed them to the best advantage. The remainder can be fed at a less expense, and as the pullets and inferior hens may not begin to lay until spring there is no necessity for feeding them heavily. The laying hens should be kept dry and comfortable and fed with a view of supplying them with the elements that tend to enable them to produce eggs. The others should simply be kept in good growing condition.

Dust for Lice

An excellent means of removing lice from fowls is to make them do it themselves, by having a lot of dry earth where they can dust their bodies whenever they like, having first sprinkled the earth with diluted carbolic acid. This acid proves too much for the lice, and they leave the premises at once, or die.

Correspondence

A ROUP REMEDY.—I will relate my experience with roup. Five years ago I had among my hens what is called roup, and lost several of them. I concluded one day to pen up a rooster and make an experiment. I gave him one teaspoonful of linseed-oil and bathed his throat outside. He got well. Last spring my turkey-hen commenced laying. She laid nine eggs and then took the roup. Her head and throat swelled, and I thought she would die. I gave her the linseed-oil treatment three times, and she got well and laid another laying, rearing a nice brood of turkeys. I have used the remedy on ducks with good success. Do not be afraid to use the remedy.

Moundville, Mo. M. F.

Inquiries Answered

Keeping Fowls Confined.—A. R. K., Mt. Clemens, Mich., writes: "Will it be proper to keep fowls confined in a large pen in summer?"

REPLY:—Good results can be obtained by confining fowls in summer, but care must be given. They should not be overfed, should have litter in which to work and scratch, and but little grain allowed, the food being varied.

Limited Capital.—I. M., Chicago, Ill., writes: "What will one hundred dollars do in starting with poultry in the country? In what kind of soil can angleworms be easily found?"

REPLY:—Much depends upon the cost of the buildings. It should make a good start for fifty hens, the flock to be increased yearly. Angleworms are usually found in rich, moist locations.

Sneezing.—J. C. H., Brockport, N. Y., writes: "I have some Hamburgs that sneeze. It started a year ago, but it is not serious and it is not roup. It is contagious, but there is no swelling of the eyes or head. I feed scraps, corn, wheat, etc."

REPLY:—It is probably a mild form of catarrh. Do not feed heavily on grain, and keep the birds dry and warm. Try two drops of camphorated oil in each nostril once a day, also giving a few drops down the throat.

Eradicating Lice.—J. C., Rice Lake, Wis., writes: "How can I drive lice from chickens? I have greased them, saturated the roosts with kerosene and tried other remedies, yet the red mites cling to the fowls."

REPLY:—Use kerosene emulsion, adding a gill of crude carbolic acid to a gallon of the emulsion, or use the acid and pure kerosene. Spray into every crack and crevice three times a week, first removing the interior fixtures. The mites or lice on the birds can be most easily destroyed by the advertised lice-killers. It requires frequent applications and care in the work to eradicate the pests from the houses.

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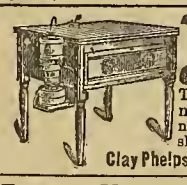
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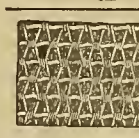
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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Wants a Prescription for a Condition Powder.—J. E. D., Sciencehill, Ky. The only prescription that I can give you, and that is worth anything, calls for good, sound and wholesome food to eat, pure and clean water to drink, pure air to breathe and good care in general.

Fistulous Withers.—E. K., Onaga, Kan. The treatment of a fistula of a horse is governed by precisely the same principles as the treatment of a fistula in a cow or of any other fistula. I advise you most decidedly to have, if possible, the necessary operation performed, and the subsequent treatment superintended, by a competent veterinarian. I will say this in addition, that the affected or diseased parts must not be pressed upon by, nor even come in contact with, any collar or any other part of a harness until a perfect healing has been effected and until every trace of soreness has disappeared.

Garget.—H. E., Thompson, Cal. What you describe is nothing more nor less than cases of garget. The same are best cured and also best prevented by more frequent and more thorough milking. The strings and clots in the udder of your cow can be removed only by frequent and thorough milking. There is no other way. So long as that is not done the morbid processes will continue, and will increase until the affected quarter, or quarters, is dry and spoiled. But as soon as all the strings and clots have been removed the morbid processes will cease and normal milk will be produced again. A first-class milk-cow, especially when at the height of milk production, requires to be milked oftener than twice a day.

An Umbilical Fistula.—W. L., Juniata, Neb. What you describe is, or rather was, an umbilical fistula. You may call yourself lucky that you did not lose your colt, in spite of the treatment applied. In such a case I would have thrown the colt, turned the same on its back, would have carefully probed the fistulous canal to learn its exact extent and direction, and then have introduced a stick of lunar caustic as far as required; would then have kept the colt a minute or two longer on its back, when I would have allowed the same to rise, and the operation would have been finished. In a few days, or at any rate within a week, the colt would have been all right, provided the operation had been performed in time.

Found Something Looking Like a Tapeworm (?) in the Liver of Sheep.—H. C. L., Johnstown, Neb. There must surely be a mistake in your statement in which you say that you found "something looking like a tapeworm in the liver, or rather in the glands leading to the gall (?)." Tapeworms, it is true, occur in sheep, but only in the intestines, and not in the liver. The entozoa occurring in the liver are entirely different. They are broad and flat, and are known as liver-flukes. A remedy to drive off worms infesting the intestines of sheep you will find in the February 15th FARM AND FIRESIDE, in an answer given to R. J. S., Greenwich, Ohio. The best prevention to keep your sheep free from worms consists in keeping the same away from low and wet lands and in never allowing them to drink water from stagnant pools or ditches.

Cannot Get Butter—Lame Sow.—J. H., Iris, Ind. Your cow is probably not ailing at all, but she is more likely too near calving, which causes changes in the milk and interfering with the yield of butter. She ought to have been dry before this time. Next time she is with calf make her dry two months before calving, and you will find that both you and the cow will gain thereby. ——As to your lame sow, the mere statement that she is lame, and has been lame since last summer in a hind leg, does not enable me to form any opinion concerning the seat, nature and cause of the lameness, consequently I cannot advise you what to do. I will suggest, though, that it will do no harm to see to it that your sow, especially when she has to nurse a litter of pigs, will get a variety of food, particularly food that is not deficient in nitrogenous compounds, lime-salts and phosphates, so as to enable her to retain for herself and to furnish her pigs all the constituents required by animal organism. Besides this, acid food should be avoided as much as possible.

Fistula of the Spermatic Cord.—A. V., Mount Carmel, Ill. What you describe is a fistula of the scrotum, or more correctly of the spermatic cord. Since it is an old or inveterate case the treatment will require a surgical operation, to be performed by a competent veterinary surgeon, and therefore it will not be necessary to give a description of the operation and of the further treatment. A competent veterinarian will know how to proceed, and one who requires a description should not be intrusted with the performance of the operation. Whether or not the fistula is the cause of the peculiar actions of your horse—actions which somewhat resemble symptoms of colic—I cannot tell you. If it is, it must be presumed that the morbid changes produced by the fistula extend into the abdominal cavity, and have there developed some chronic peritonitis. If such should prove to be the case the prognosis will not be very favorable, even if the required operation is ever so well performed. A thorough examination by a competent veterinarian will probably reveal the true condition. The longer the delay, the greater will be the danger.

Chronic Metritis—Calf Died of Dysentery—Tympanitis.—S. A. W., Wolverine, Mich. Your cow, it seems, was severely injured at parturition, and now suffers from chronic metritis. If the lesions are extensive, and have already resulted in producing general pyemia, the prospect of recovery will be rather poor, but if the morbid changes have remained local and restricted to the mucous membrane of the uterus an irrigation once a day of the latter organ with a one-per-cent solution of creolin in blood-warm water (clean water that has been boiled and been allowed to cool until it has obtained a temperature of ninety-eight degrees Fahrenheit) may effect a cure. Such an irrigation is best made if a rubber tube, not more than half an inch in diameter and about five or six feet long, is attached to (shoved over) the small end of a large funnel; then introduce the free end of the rubber tube through the vagina and through the os directly into the uterus (this is usually possible in a case like the one in question), raise the funnel as high above the cow as the length of the tube will permit, and pour the solution into the funnel. The creolin solution will then by its own weight descend into the uterus and thoroughly irrigate the same. This method is much less dangerous and much more reliable than the use of a large syringe. Half a gallon of fluid may be used at each irrigation.——Your calf died of dysentery, probably caused to become fatal by an improper diet and the "use of all kinds of medicine." Since it was already four weeks old when it became affected I have no doubt that it could have been saved if it had at once been properly treated. If the young animals are not too young, say not less than a week or ten days old when first affected, the following combination of medicines seldom fails to effect a speedy cure: Re. Magnes. carbonic. Dr. i, Opii pulv. Gr. x. Rad. Rhei pulv. Dr. ½ (Russian to be preferred), Infus. flor. Matricariae chamomillae unc. vi. S. To be divided into two equal parts, one to be given at once and the other twelve hours later. At the same time the diet, of course, must be faultless, and particularly sour milk and all kinds of spoiled food must be avoided.——Your male calf died of tympanitis, brought about by improper food or food possessing a great tendency to ferment, probably grass or clover grown in the shade beneath trees, and a weakened digestion caused by an improper diet. Your statement that the calf at the post-mortem examination had neither stomach nor intestines I have to take either as a gross mistake or a huge joke.

Worms in Pigs—Dehorned a Heifer—Worms in a Horse.—J. G. P., Saffordville, Kan. Since you found in the pig that died but one large worm, undoubtedly an Ascaris suis, in the stomach, it is, unless you have other evidence, by no means sure that worms caused the death of that pig and that all the others are suffering from worms. So-called hog-cholera is liable to present similar symptoms. Still it may be that you are right. If such is the case, these large worms will be driven off if you give each pig with one meal one fourth of an ounce of decorticated castor-beans.——As to your dehorned heifer, I have to draw your attention to the fact that in all grown, or nearly grown, cattle the frontal sinus (cavity) extends into the bony processes of the horns, and consequently causes them to be hollow. This is perfectly normal and nothing morbid. If you found the horn hollow on one side and not on the other it is simply due to the fact that you have sawed off one horn much closer to the head than the other. I advise you to irrigate. Syringe into the frontal sinus of your heifer a one-per-cent solution of creolin in blood-warm water that has first been boiled until the solution flows off clear through the opening. This done, take a bunch of absorbent cotton, saturate with the same creolin solution, and patch it over the opening; then take a strip of clean muslin, several yards in length and only about two and one half inches wide, and wrap it in a figure eight around the crown of the head in such a way that it will keep the cotton in its place and will itself stay where you put it. This done, you may apply a little tar to the bandage, particularly where it covers the opening. If you do the whole thing with neatness and accuracy probably nothing further will be necessary. If you do not you will have to do the whole thing over again in a few days. If your heifer was already ailing before you dehorned her you will have to look for some internal disease.——As to your horse that is always wormy and passes worms at each passage, allow me to say that the worms that pass off have already done all the damage they ever were capable of, and that if they are small and pointed worms they cannot be reached with any medicine so long as they are in those parts of the body in which they can do damage. In such a case, therefore, prevention is of far more value than any attempt at treatment. (1) Never allow your horse to drink any surface-water from stagnant pools or ditches, or even from a shallow well, but particularly no water that contains the drainage of any horse-yard or pasture, because such water is apt to harbor the worm-brood. (2) Endeavor to keep your horse always in good condition, and feed only such food as is sound, clean, digestible and wholesome, because parasites, worms included, never feel comfortable and at home in a host that is healthy, strong and vigorous. Of course there are worms of horses that can be reached and be expelled by medicines, but these are seldom numerous, and do not do much damage except in very young, very old and very sickly horses. Among these are the large ascarides in the small intestines.

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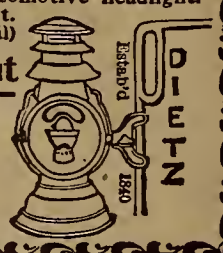
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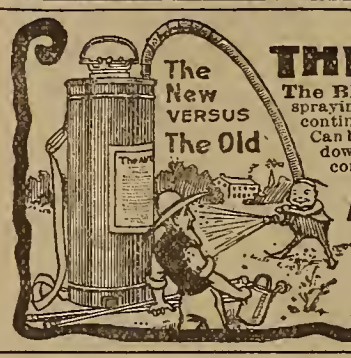

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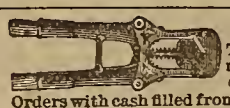
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THE GRANGE

Conducted by Mrs. Mary E. Lee, New Plymouth, Ohio

Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.—Dr. Manasseh Cutler.

Current Comment

Housekeeping Not a Gainful Pursuit According to the last census returns but twelve per cent of the women of the United States are classed as occupied with gainful pursuits. Only those women are so classed who can show a financial return for their labor.

Just how the farmers' wives, who, while attending to the multifarious duties of a home on a farm, have bought the groceries, linens, coarse clothing and in many instances all of their own clothing and the kitchen and table furnishings with the butter-and-egg money, will regard this classification remains to be seen. We mistake their spirit of enterprise and independence if they do not protest. However, protests are useless.

The wise, foresighted woman will be prepared for the census-taker of 1910. She will keep an accurate account of butter and eggs and all things produced and marketed by her labor, together with the price received therefor. Furthermore, there will be a strict account of all household expenses, with a private check against those purchased with the proceeds of her labor. Then when 1910 brings the ubiquitous census-taker she will be prepared with authentic data, not guesswork statistics, to combat the notion that she is a dependent. Apropos of the census-rating, have you not heard farmers, just a few, boasting of their broad acres, capacious barns and convenient surroundings with a pretty large emphasis on the "I." Just show them your account of your income and what it did toward accumulating all these blessings.

Just what is the earning capacity of the farmer's wife? For sentimental reasons we will not include the art of making a house cozy and homelike and caring for children and flowers, but only work which is productive of a financial return. Will you place the sum at fifty dollars, two hundred and fifty dollars, five hundred dollars or nothing?

The Case of the Convict Since the beginning of civilization the problem of the disposition of him who encroached upon the rights of others has occupied society. That a man should commit a crime against society and then be supported by the body he has outraged is contrary to our sense of justice. Men are in accord with the notion that the criminal should not only be self-supporting, but his labor should by compulsion benefit the society he has injured. He must heal, in so far as is possible, the wound he has made. But how best to utilize his labor has been the question. The experiment of Louisiana's convict farms has proved so successful that other states might profit by her example.

A new constitution was adopted in 1898. One of the provisions was that after the expiration of the leases then in force no more convicts should be hired to private concerns. The state bought land, erected the necessary buildings for housing the convicts and carrying on farm operations. Able-bodied convicts were placed at work in the open air raising cotton, corn and crops for human sustenance, and caring for cattle and hogs. The returns for the first year show that one hundred and eighty thousand dollars in cash was realized, and the board of penitentiary commissioners has on hand "several thousand tons of hay, forty thousand bushels of corn and enough peas and potatoes to carry men and stock through the next crop year." Some of them are employed in building levees, and others, who are unable to perform such active labor, are busied with light work in prison at Baton Rouge.

The good effect of the system upon the health of the prisoners themselves is shown by the fact that the mortality among Louisiana convicts has been reduced one half. The legislature had appropriated two hundred thousand dollars for the experiment. The men were self-supporting and had acquired knowledge that would be helpful to them did they desire to live an honest life at the expiration of their sentences. The outdoor life would be far more conducive to right living than the conditions which exist in the ordinary penitentiary.

Louisiana's experiment may prove helpful to other states. In most Northern penitentiaries the convict population is sufficiently large not only to carry on farm operations necessary to support an institution, which exists because of their misdeeds, but also to perform other productive labor. With modern farm-machinery and the scientific knowledge diffused by our colleges and experiment stations the moderate labor of a small per cent of the inmates would suffice.

If men of sterling worth and business sagacity were selected as managers and directors of the farm enterprises the effect on the men could not but be stimulating. To make the effort of a high moral advantage only those convicts who gave promise of a desire to live an upright life, and who would be amenable to good influences, could be utilized in farm operations. The contact with men who would command their respect, outdoor labor and the fact that they were mastering the key to making an honest living after their term of imprisonment was over would have a stimulating effect on those amenable to moral improvement.

In all prison populations there are those who are seemingly governed by the brute instinct; who will never by their own volition make helpful members of society; who, unless forcibly detained, will prey upon society; upon whose faces "criminal" is plainly stamped; to whom the shaved head, stripes, ball and chain or armed guard carry no shame of disgrace. Criminal by nature, criminal they will always remain. The expiration of one sentence means the inauguration of a new series of crimes upon humanity. While we pity them as moral delinquents, our sense of justice says they shall not be let loose to commit further crimes. Such men as these, whether in penitentiary, jail or workhouse, could be put profitably to work upon our roads. Good roads we need and must have if we are to realize the highest type of social and material life. The cost has been prohibitive. The amount used annually for the maintenance of these criminals would build many miles of hard road-bed. There is a vast amount of work in road-making where unskilled labor can be used. For the most part these criminals are unskilled in anything save crime.

There are few rural neighborhoods that are not annoyed by petty thieving and various depredations. Later it will be outraged by some atrocious crime. In all communities there are those who drift, having no strong, underlying principles to guide them, and yield to the predominating influence. They drift almost imperceptibly from a small offense to a greater one. The presence of men with the disgraceful ball and chain, guarded by armed men, would do much to deter them from following their evil inclinations.

Put these idle, vicious criminals to work upon our roads. Since the public must maintain them, let it receive a moiety of service in return for what it suffers from the "class that preys."

Keep Up the Grange I occasionally get a letter from some one telling of the hardship in keeping up a grange. The reasons given vary little, no matter from what section they come—lack of interest; too few members; often no quorum, and all but the most faithful and hopeful lose courage and interest; pressure of work; lack of material for good discussions; hard-feeling between members.

It does seem sometimes as if the fates were determined to make of no avail the work of the few who are really anxious for the grange. Sometimes it is a series of bad days for grange-meetings, or a pressure of work, or several important functions from which some of the members cannot well absent themselves. Be the reason what it may, the meetings for a time are small, and often a quorum is not present. The few members become disheartened and discouraged and decide a grange cannot be made a success in their community.

"They have a splendid grange over at Bennettsville, and the one at Johnstown is a hustler. Why, they carry over twenty thousand dollars' worth of insurance, and last year they bought over two thousand dollars' worth of goods through the grange. Adam Brown told me he saved over two hundred dollars last year on his purchases of machinery, fertilizers and groceries. I was over there last grange-night, and they had a great time. The Baker boys were there with their stringed instruments, and the music was fine. One of Dan Mitchell's girls had a recitation that brought down the house. Mrs. Graham had a paper on home sanitation that made me dig a drain for the slops from the back door. Wife says she feels better even now. But the best of it all was they decided to let an agent for a creamery come in and explain his proposition. Then the members asked him all kinds of questions. He was glad enough to make an excuse to get away. Then that young Miller boy, who is a crank on dairying, got up and explained the whole matter, showing how the farmers could, for about one half what the agent wanted, establish their own plant. Why, that night alone saved me from being taken in.

"The grange is a great thing, but conditions here are different. Over there the school-teacher is the lecturer, and the ministers of both churches are members and help in every way they can. Why, such a grange would be worth everything to us. But some way we can't make it go. Better let it drop and let some of the younger people take it up after awhile—if they want to." So remarked an acquaintance.

Well! aren't you consistent? Let it drop and let the young people take it up—if they want to? Haven't I heard you argue in favor of the Sunday-school that the young people might get into the habit of attending some form of worship on Sunday in order that they would go to church when they grew up? Leave it for the young people? Have you no duties you are bound to perform? Are you going to keep some one waiting on you all your life? Do you do your duties by shifting them to your children's shoulders? You know the grange is a good thing—good for you financially, mentally, socially, and as good for your children as yourself? One night at a neighboring grange saved you money and influenced you to do a bit of sanitary work at your house that you ought to have done years ago, and yet you don't think it of sufficient value to spend a little time and energy in fostering. Conditions are different? Who makes the conditions? Who but you and your neighbors are responsible for the conditions of your own immediate community?

"My neighbors don't seem to take enough interest."

Oh, I beg your pardon, but aren't you a neighbor to the balance of the community! And aren't you ready enough to give up? You can't shoulder the blame on your children, so you try the neighbor dodge. It won't work. It played out long ago. And the teachers and preachers help? Well, who told you? Who employ both as helpers, to hire men and women who would not help you? Who would stand aloof when you made an effort to better your social life? Don't skulk and dodge. Shoulder your own responsibilities.

"There are only a few of us."

Will you grow stronger by quitting? You don't have a quorum? Will you get one by talking of giving up? Hold on to your charter, no matter what the difficulties. You know the need is great, all the more great if hard to keep alive. A dead grange is a pretty effectual barrier against reorganization for many years thereafter. Observation and experience have taught you that the noisy, spasmodic efforts put forward by any agency are seldom lasting. That the work which counts for the most is the quiet, unassuming, consistent, persistent lives of men and women who live with you and grow into your hearts and lives. They become a necessity to you. So will the grange, and the harder you have to labor for it, the greater the struggle you make to make it a success, the dearer and more essential to your being will it become. Hold the charter and pay the dues. Make use of its financial features. Whenever you can, visit a live, energetic grange. Attend the annual convention as often as possible. Keep your own faith and that of the few families who are true and steadfast alive. Talk grange not officiously or offensively, but here a little, there a little. Above all, live up to its precepts.

The news of the grange is spreading. Many of the leading agricultural papers maintain a regular grange department. Your neighbors get at least one of these papers. The value of organization to other industries will suggest a like value to the farmers. The desire to better their own condition will lead them to use the grange as an agency to that effect. If one already exists they will drop in now and then, and after a time you will look back on those years of waiting as the most precious in your life. How long shall you wait? Well, five years ought to bring a reward. If not, I would hold on two years longer. If seven years did not bring the desired result I would pack up my household Penates, sell the holdings I possessed and go to a commuuity with enough enterprise, progress and brotherly love to maintain a good grange. But be mighty sure before you give up that there is no further hope. It is useless to give this warning, because seven years faithful service and devotion will so endear it to you that you will not willingly forsake it.

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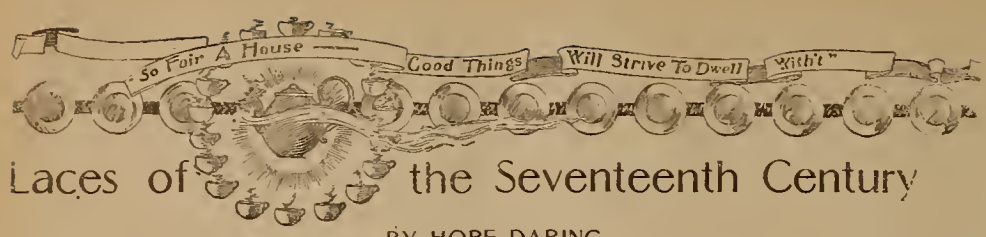
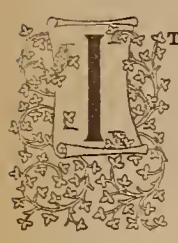


Laces of the Seventeenth Century

BY HOPE DARING



It was during this period that lace-making reached its highest point of excellence. Laces were of great beauty, were sold for fabulous prices, and formed a part of the most valued possessions of kings and nobles.

At this time many varieties of point-lace were produced. Perhaps the best known was the Venetian point. A brief description of the manner of its manufacture will give a general idea of the making of all these laces. However, let this be preceded by the pretty legend which tells of the origin of the lace.

In Venice dwelt a peasant maiden, who was apprenticed to a lace-maker. The girl's lover was a sailor. Returning home from a voyage to the southern seas he brought her a spray of the beautiful coral known as "mermaid's lace." The daintiness of the tracery pleased the young girl, and while waiting for the return of her betrothed from another voyage she copied the spray of coral. With patience and skill she worked it out in bold relief upon a mesh of fairy-like fineness. The exquisite beauty of her work attracted attention. It was imitated by others, and the lace received the name of the maiden's native city.

The pattern for Venetian point was traced upon parchment. Threads were lain along the principal lines and covered with buttonhole-stitches of the most minute thread. Flowers, leaves, sprays, scrolls and various other designs were woven in with the single thread carried by the needle. These designs were connected, sometimes by a fine mesh and again by loops called "brides."

There were many other varieties of point-lace. Rose-point had the figures worked out high above the foundation. Spanish point and Portuguese point took their names from the countries in which they were first made.

The introduction of point-lace making into France took place in the reign of Louis XIV. The court of this monarch was noted for extravagance and display. Vast quantities of lace were imported from Italy at a great expense. Colbert, the chief minister of the French king, saw a way whereby this outlay of money could be expended in his own country. He established a lace-manufactory at Alencon, and secured teachers from Venice. Instead of being satisfied to practise the methods taught them the French lace-makers soon produced new varieties of point-lace. Two of these—the point d'Alencon and point d'Argentan—became famous. The point d'Alencon differed from other kinds in that portions of the pattern were made by different persons and joined together by a web of marvelous delicacy. The point d'Argentan was of exceeding fineness of texture. In a single mesh measuring one tenth of an inch there were more than fifty buttonhole-stitches.

Flanders, the territory now embraced in Holland, Belgium and a part of France, excelled in lace-making. The principal Flemish laces were the Brussels and the Mechlin. The former was made both with the needle and upon the pillow. The flax for the thread used in making Brussels lace was spun underground in damp cellars. This was done because the light and dry atmosphere of the upper world would cause the minute thread to break. The spinning was done upon a black background, and a single ray of light was focused upon the thread. The distinctive feature of Brussels lace was the flowers woven in. These were made separately from the mesh, no matter whether the lace was formed upon the pillow or with the needle.

Mechlin was a beautiful pillow-lace, light in texture and woven of a flat thread. This lace became very popular. Its delicacy caused a seventeenth-century poet to call it the "Queen of Laces."

The Valenciennes was made in large quanties during this period. Changing fashions made it lighter and less substantial. At one time in the reign of Louis XIV. the city of Valenciennes contained between three and four thousand lace-makers. Although the same lace was made in other cities, it was claimed that nowhere else was it brought to so high a state of perfection as in its parent city. A variety of this, called the Ave Maria pattern, was produced in great quantities by the women of Dieppe, a town of France situated on the English Channel. These same workers also made a lace known as point d'Dieppe. This name was really a misnomer, for the lace was not point, but was made upon the pillow.

Spanish point, although extensively used in the country of its manufactory, never became so well known abroad. In Spain vast quantities of this was used for ecclesiastical purposes. The altars, the garments of the priests, and even robes for statues of the Virgin, were lavishly trimmed with Spanish point.

It was in this century that the most famous and beautiful laces were made. The invention of machines for producing an inferior kind of lace had much to do with the decline of the manufactory of the more expensive kinds. The changed affairs in France and the final overthrow of the monarchy was another cause. It has been said by some writer that "Valenciennes fell with the monarchy."

Among the Heroines of the Civil War

Of the eight millions that passed in and out of Buffalo during the six months of the Pan-American Exposition few, if any, had time to see the city's sacred or historic spots.

On Washington Street, across from the public market, there stands a tall, large gray building with the words "Guard of Honor" cut in the stone high up in front. This "Guard" is a large club, composed of men and youths, with reading-rooms and parlors, and also sleeping-rooms for transients, who pay a small fee if they have it, but are welcome if they have no money. The orchestra connected with this "Guard of Honor" has always been a delightful feature of the organization. The boys that formed the first club have grown to men, and now bring their wives and children to the social gatherings. Besides the many week-day uses of the rooms, on Sunday a school is held in the afternoon for the study of the Bible, all services to be undenominational.

The leader and founder of this club was a young woman. She started the orchestra, and led and drilled it for years, playing one of the instruments herself. Last year she died. Why did she give this loving service to young men and boys? To be sure, she did many helpful things for women as the years went by—she taught clubs parliamentary rules, and gave help in a thousand ways—but her heart-work was for the young men. One day I asked her why, for if she had not chosen this busy life she might have been a lady of leisure. She told me of her young girlhood home. Her father had died when she was very young, but her memory of home until the Civil War came was that of a home perfect in appointment, her mother and two brothers forming the family, and their happiness had been as perfect as the home.

"I would have given my life for my brothers I loved them so," she exclaimed. "I played base-ball when we were children because they played, and I learned to play the cornet and flute and many instruments because they played so well. The Civil War came, and my two brothers enlisted, and the message from the second Bull Run battle was that one brother was probably fatally wounded. Mother said I must stay at home to be able to send her whatever she required; she would go and try to save the boy. At first she was not allowed to pass the lines; but gentle as she seemed, she had the Revolutionary blood in her veins that refused to recognize any such obstacle.

"It was on a hot August afternoon that my brother fell, but a pouring rain came before night and washed the wounded limb so thoroughly that for the time being it saved his life. The wounded were finally put upon boats and barges. At the landing mother walked from one to another until she found her boy and got him to Washington. The hospital stood where Dr. Sunderlin's church afterward stood. My mother nursed my brother until November before she could move him home. I was constantly sending things not only for her use, but for a great many others. Mother spared no money. In the meantime my other brother was killed in Florida, and was buried there. In mother's long nursing night after night she bound mustard upon her own wrists to keep herself awake in order to fan and watch her precious patient or to help some other sufferer. They came home in November, and my brother lived until summer.

"Stricken to the earth as we were, there came to me the great desire to do something more for others. I went at first to a little mission Sunday-school led by one of the saints of the earth—one whom all called Chaplain Cook. I taught a class of boys. They were a typical mission class, but in the years that followed we together founded the 'Guard of Honor.'

"I have had one message for all my friends, 'You can pay no greater honor to your dead than to serve the living.' Instead of a miserable life, with no music and sunshine, my life has been full of brightness and content. My brothers were brave, and so was my mother. The little I have done is a memorial to them. Many hundreds, even to thousands, have been members of the 'Guard.' Their lives reach out to others, and there is no end." Mary Joslyn Smith.

Infants' Bootee

Abbreviations.—Ch, chain; d c, double crochet; s c, single crochet; st, stitch.

Chain 10.

First row—1 s c in first 4 st of ch, 3 s c in next st, 1 s c in last 4 st of ch; turn.

Second row—Ch 1, 1 s c in 5 st, being careful to take up the end st and outer ch of each st, so as to give the ribbed effect, 3 s c in next st, 1 s c in next 5 st; turn.

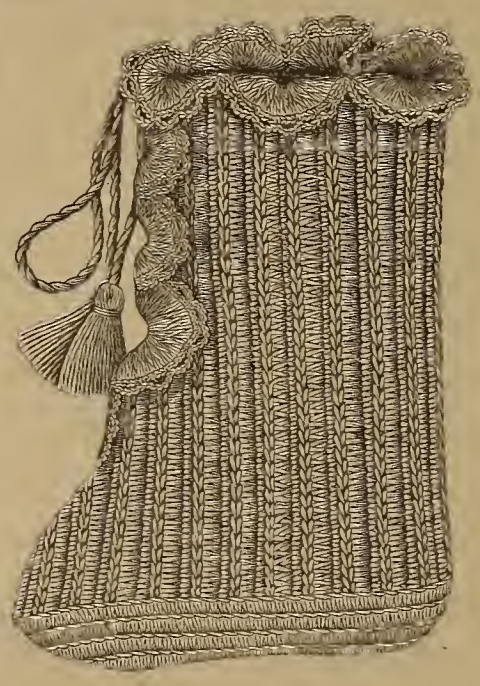
Third row—Ch 1, 1 s c in 6 st, 3 s c in next st, 1 s c in next 6 st; turn, and continue until you have five ribs or ten rows, being careful to crochet 1 ch at the beginning of each row. This makes the vamp for the leg.

Fourth row—Ch 1, 1 s c in 14 st, ch 17; turn, 1 s c in each st of ch and 1 s c in 14 st of vamp, making 30 st in all; turn.

Fifth row—Ch 1, 1 s c in each st; turn, and continue until you have nineteen ribs, or thirty-six rows, and join to other side of vamp.

Sixth row—1 s c in st between vamp and leg, 10 d c in center of vamp, 1 s c between vamp and leg; make 3 scallops on each side of the front, 6 scallops across the top, break yarn, and fasten on the wrong side of work. Thread a needle and sew together the 5 st of ch at the toe.

Fasten blue, pink or any color desired silkateen or silk between s c and d c of the first scallop at the top of the bootee, ch 3, 1 s c between first and second d c, ch 3, 1 s c between second and third d c; continue across the top of bootee; make 4 ch on first



scallop of the front of the bootee, and fasten each the same as other ch; ch 3, lay the scallop back on work, put hook through top stitch of second rib and between fifth and sixth d c of scallop, draw thread through and fasten with s c; continue as before to the middle of second scallop, then fasten back like first scallop, and so on with the remaining five scallops.

For the Sole of the Bootee.—Fasten the yarn in third rib from the toe on the right of work; crochet 60 s c around the bootee.

Second row—1 s c in every s c, skipping 1 s c at the center of toe and heel.

Third row—Same as the second row.

Fourth row—At the toe skip 1, 1 s c in next, skip 1, 1 s c in next, skip 1; the second "skip 1" is to be in the center of the toe. Skip 1 st at the center of the heel.

Fifth row—At the toe same as the fourth row; at the heel skip 1, 1 s c in next 2 st, skip 1, 1 s c in next 2 st, skip 1.

Sixth row—At the toe put the hook through st, draw thread through, put the hook through next st, and draw thread through; repeat until you have six loops on hook, thread over hook, and draw through six loops, thread over, draw through one loop; do the same at the heel.

Seventh row—Same as the sixth row. Turn work inside out and crochet two sides together; break thread, and fasten neatly.

Lace the bootee with cord and tassel of the silk or baby ribbon. Frances Law.

Children's Underwear

Many mothers find it difficult to keep the little ones supplied with good underwear. Children will find a way, as a rule, to tear, rip and wear them out at an astonishing rate. I have had some experience in providing clothing for little folks, as I have two sturdy little boys of my own, and can testify to their ability to get through a large amount of clothing in a very short time. Long ago, being economically inclined, I began to cast about for some method of keeping the wardrobe well supplied, and since I have adopted the plan of furnishing the needed articles with the smallest possible cash outlay I am never at a loss for good underclothing for the children, and plenty of it.

I began by ripping up all the old knit underwear cast off by the adult members of the household, cutting out all the good parts to use in making over. For summer wear gauze was used, for autumn and spring heavy knit cotton, and for winter the knit wool. Patterns were cut from the children's shirts and drawers, allowing for all seams, and by these the garments were cut and made. A ribbed border with a selvage edge finished the bottom of sleeves and drawers. Whenever it could be left in the goods and cut to look as though straight from the factory it was done, but often the ribbed band was simply stitched on. If this had the appearance of being unfinished a row of silk feather-stitching covered the seam. The neck of the shirt was neatly faced with a bias piece of silk or satin, and the front plait was decorated with a similar facing, in which the buttonholes were worked.

The drawers for my boys were made with two muslin bands, three buttonholes in each band to button to underwaists made of gauze or Jersey knit wear. My favorite waist for little boys is the skeleton, but any mother can make it, or something very similar. The buttons are fastened on cotton tape strips, that are sewed on the waist up the front, over the shoulders and down the back wherever needed. Allow for nine buttons at the waist-line. If an extra set is needed for buttoning drawers or skirts to they may be fastened lower down on the strips if desired. Catherine.

"Southern Praulines"

Several years ago, while traveling in the South, it was my good fortune to meet with a charming elderly lady who had been very unfortunate in her younger days. She had lost all she once possessed by the ravages of the Civil War.

I was driving from New Orleans to Carondelet, and being overtaken by a terrible rain-storm I took refuge in a small but neat cottage, which proved to be the home of a once very rich Southern family. Being kindly welcomed by the old lady upon entering the house, and while waiting for the storm to abate, she gave me a slight sketch of her misfortunes.

Her husband and two sons were killed in the battle of Helena, in Arkansas, in 1864, her comfortable home burnt down and all her land confiscated. She was left penniless and with a little daughter, who had been an invalid all her life. The mother told me she had supported herself and this daughter, who was a great care, being almost helpless when I was there, by her needle and by making and selling "praulines" to a few families, who were her kind friends and patrons.

These "praulines" are a delicious confection she had been taught to make by an old French creole.

The Southern people are very fond of sweets, and a small dish of bonbons is placed on the table at all meals.

This lady was kind enough to give me the receipt for making them. I have been very successful in selling this delightful candy, being a member of the woman's exchange where I live, and never fail to find a ready sale. The following is the receipt for "praulines" as given me by the lady:

Three coffee-cupfuls of dark brown sugar, one coffee-cupful of new milk, three cupfuls of pecan-meats and one tablespoonful of butter with the salt worked out. Put the milk and sugar in a porcelain-lined saucepan, cook until almost candy, draw the pan back, add the butter and pecans, beat until it grains, turn out on a buttered dish, and separate in small pieces. Mrs. L. Clark.

Sweet-peas

THERE is no flower that repays one for the trouble and time invested as the sweet-pea. To be successful with it one must have good seed, which can always be had from a reliable dealer, and a properly prepared garden-spot.

To insure growth and a long season of blossom they must be planted early. Last year I planted mine on each side of the wire fence around the chicken-yard.

A trench about eight inches deep was dug as early as the ground thawed, which is often in the middle of February or the first of March. Better than this is to prepare the trench in the fall and put a board over it. However, failing this, have it ready as soon as possible, so that the seed can be put in the ground by March 17th. Cover with about two inches of soil, and when the seed begins to sprout keep filling up the trench about the small plants. This deep planting gives the plants a vigor and strength of root to resist the intense heat of the hot months later on. By May 1st they might be well under growth, and when the weather becomes settled will spring rapidly into bloom.

Their lavishness of bloom is something delightful, and to insure this they must be cut every morning, not allowing any seed to ripen, for if you do the plants begin to die. The delicate odor of the sweet-pea makes it a beautiful table-flower, as it is not obtrusive. However, they are not lasting, and must be replaced with fresh ones every day.

Many of the country women add quite a little sum to the proceeds of their market-stuff by raising them for sale; a good-sized bunch bringing five cents.

An eastern or southern exposure is best, as they need the bright sun to bring out their loveliness, but they must never suffer from drought. A mulching of grass or hay at the roots will keep them moist, so that thorough watering need be done only every other day. Care should be taken to do this only after sundown, and never with a hose, as the force of the water kills the plants, and if watered in too great heat they are easily scalded.

One must give time to flowers to insure any success, and neglect is soon seen in drooping or dying plants. A good way to keep up the blooming until late is to plant the seed a few weeks apart, to insure a succession of bloom. W. D. MARSH.

Design for Crocheted Fascinator

This is intended only to show how the fascinator is to be worked. The work is begun at the center, and the meshes increase in size as the fascinator increases. A three-cornered fascinator could be worked on the same principle by working half of the directions for the first row, then 3 ch, turn, work back to end, 3 ch, turn, and so on, turning with the 3 ch at each end. Use Saxony or any preferred wool. Make 5 ch, join to form a ring; repeat, 3 ch, catch under ring with a s c, and repeat three times more. Make 1 ch, catch in back of next loop of 3 ch, take hook out, put it through the middle of center st of 3 ch, draw through, drop the st, then work off; this leaves you at the top of the loop to begin the next round.

Second round—3 ch, catch with a slip-stitch in the same st you started from, 3 ch, 1 s c in middle st of next 3 ch, 3 ch, catch in the same st for a corner and widening, 3 ch, catch in the next loop, 3 ch, catch in the same loop, 3 ch, catch in the next loop, 3 ch, catch in the same st; continue in this way, being careful to always widen in the same st at each of the four corners by working twice in one loop, and between the corners simply work once in each loop. After the desired size is obtained for the center of the fascinator make 5 ch instead of 3 ch for three or four rows, then finish all around.

A fascinator of this description may be made of two colors, using one to form a border. A fascinator of one color, however, is considered prettier and more stylish.

NAOMI MATTISON.

Housekeeping in Cold Weather

For the last few years our coldest weather has come in February. If January has been mild it is wise to be prepared for at least spasmodic periods of cold weather later. One of the greatest household annoyances from cold comes from the freezing of water. If the water is piped into the house, and great care has not been used to place the pipes where they will not be subject to frost, much trouble will result. Pumps must be watched and some arrangement made to empty the pump at night at least, or the morning may find us without water until the pump is thawed, and then maybe the freezing has injured the valve so that it would not do its duty.

Besides the care for the water-supply cold weather brings other extra cares on the housekeeper. Many houses are so carelessly built that whenever unusually cold weather comes the cellar and store-room must be looked after. Sometimes a large bucket of water set in the cellar or store-room will prevent damage from frost, or a large lamp or a small oil-stove left burning will make heat enough to keep the frost out.

Many people suppose meat, poultry and fish are not injured by freezing—in fact, that meat and poultry are improved. This is a mistake. Beef does not deteriorate as much as more delicate meats, but it is never so good after freezing, and poultry and fish lose nearly all their delicacy of flavor. If any meat is accidentally frozen, do not let it thaw until it is needed for cooking. It cannot be thawed slowly by heat without acquiring an unpleasant odor and taste, and losing much of the juice of the meat. The best way to thaw frozen meat is to put it into cold water and set it in a cool place, but not where the water will freeze. Be very careful not to leave the meat in the water after the frost is drawn out, but prepare it for cooking just as soon as it appears flexible. If the meat is to be roasted, rub butter over it, and dredge thickly with flour to seal in the juices, then baste with unusual care while it is roasting.

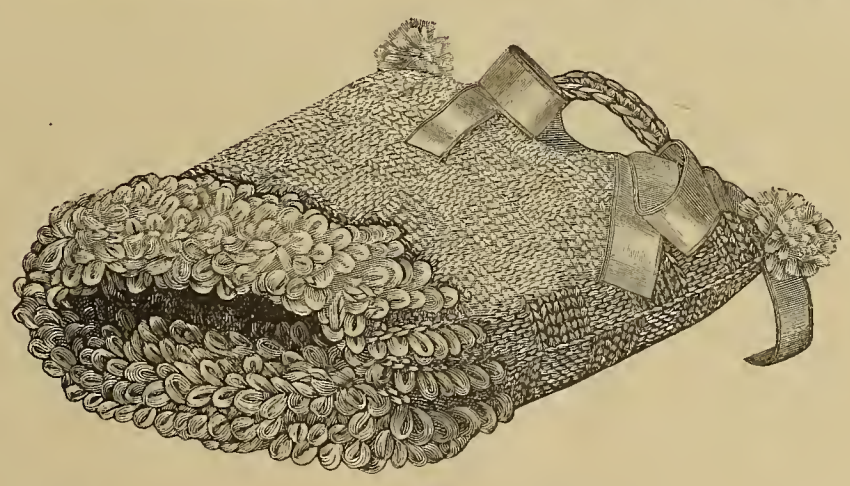
The cold days of midwinter make some hot dishes necessary for supper or luncheon if dinner is served at night. Bananas, oranges, apples or preserved fruits of various kinds make excellent fritters. Cheese fritters and Welsh rarebits are also good hot dishes for these meals. Any good fritter-batter may be used for these; as, one cupful of milk, one teaspoonful of melted butter, one egg, a little salt, and prepared flour enough to make a thin batter. About one cupful is enough. Slice bananas, apples or oranges lengthwise, and squeeze a little lemon-juice over them. Sprinkle a little sugar over the slices of bananas, oranges or apples, and let them stand a few minutes, then dip them in the batter, coating each side evenly, and fry a golden brown in hot fat. If preserved or canned peaches, etc., are used let the pieces of fruit drain in a sieve for half an hour before dipping them in the batter. Cheese fritters are made by adding a cupful of grated cheese to a fritter-batter, and then dropping it by spoonfuls into hot fat.

Cold meat minced, made hot in a gravy and poured over slices of toast, or any meat, chicken or fish minced, mixed with a cupful of stock or cream sauce, and baked in two crusts in little patty-pans, are tempting hot dishes for supper or luncheon.

MAIDA McL.

Knitted Foot-muff For an Invalid

This is of two parts, the outside knitted in blocks and the inside crocheted in loop-stitch; or it can all be knitted in loop-stitch. For the outside cast on 45 stitches, and knit 5, purl 5, for five rows, then reverse. Knit nine rows of blocks. Trim with lilac ribbons. The lining is completed in forty rows.



"Katzenjammer"—A New Name for "The Blues"

It is liable to come upon us at any season, but it is claimed that what is popularly termed "the blues" becomes almost an epidemic at certain times, especially at the Lenten season, and it will be a satisfaction to those who suffer most from this malady to know that at last it has a definite name.

"Katzenjammer" means simply to be "sick of life," to find "everything going wrong," and life simply "not worth the living." It is "catsickness" in its literal German translation, "lifesickness" in its freer one.

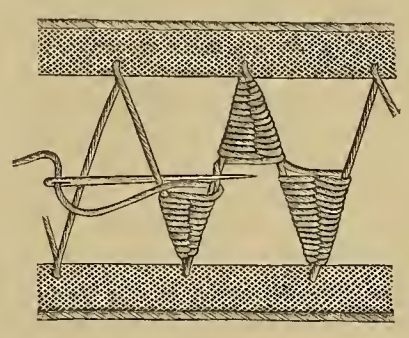
"There is not one of us," said a woman recently, who evidently speaks from bitter experience, "who has been successfully vaccinated against it."

To Germany belongs the proud distinction of first analyzing and naming it, but there is neither speech nor language where its voice is not heard, nor human being who does not know it by its second name.

In the bright lexicon of youth it even appears perhaps more frequently than in that of age, for it might be said we spend the first fifteen years of our lives in realizing things, the next fifteen in kicking against the pricks, and the remainder in submitting to them.

Young men and maidens, old men and children, in all places and at all times, know the qualms of the malady; but the Germans, whose pessimism has a lingering love for details, assign to it one victim and one time above others—my lady in the midst of her Lenten season.

"Forty days' intermission!" called in the whirl of alleged gaiety and enjoyment sets my lady's restless brain, for want of other distraction, to taking stock of life, and the result is—katzenjammer and vexation of spirit. Why describe the disease for that fortunate one among Nature's curios, the woman in ten thousand, who has never had



it? The other nine thousand nine hundred and ninety-nine have all walked through the dread valley of the shadow with its "blue devils" whispering in their ears, and would ten times rather wrestle with Apollyon himself at the foot of the hill Difficulty.

Katzenjammer is not unhappiness, for that comes from external conditions, while the former is equally at home in the house of mourning and the house of mirth; least of all is it that divine discontent which pricks us on from height to height of achievement. Too languid for despair, too contemptuous for melancholy, it is rather a creeping disgust for life, "its wretched joys and worthless woes"—a comprehensive conviction that nothing is worth anything.

If at this juncture I have the world on tiptoe expecting the description of the evil, to be followed by the receipt for the remedy, I can only say, with the country editor who was asked to change a ten-dollar bill, "You flatter me." If I knew a cure I would not recklessly cast the precious pearl before an unpaying public, but would do like the enterprising divine, whose advertisement in a religious journal once met my astonished eye—he promised to answer religious doubts and difficulties "by private letter," and thoughtfully added, "Inclose one dollar for reply."

Of suggesting cures there is, of course, no end. Work is advised as the great panacea when we know that is exactly what our own particular case of katzenjammer comes from; "rest, then," we are told, and as soon as the house is swept, garnished and empty the demon whoops in with seven worse than himself. "Don't give in to it" is the strong-minded counsel of some hypocrite, who must know at the bottom of his heart that one might as accurately speak of "giving in" to an avalanche.

Nevertheless, while the pound of cure is unattainable, and the whole ounce of prevention very nearly so, a few grains at least of the latter are to be had. How much of our "lifesickness" would take to itself wings and fly away if we did not make a cult of it few of us have the frankness to say. The woman—she is everywhere in these self-conscious days—who wilfully reads, listens to, and invites all the description and elaboration of her symptoms she can get hold of; who, for the forlorn comfort of making epigrams, writes down her experience, and puts in circulation a fresh lot of superfluous cynicisms; who, if she would confess it, takes a subtle pride in the melancholy distinction which lifts her above her unthinking fellows—needs to be unceremoniously toppled off the pedestal on which she poses, smiling at Grief, and told to fight with him, kill or be killed by him, anything that calls for healthy activity.

It is one thing for an accidental pin-prick to show that the doll is made of sawdust, another to deliberately rip it up for investigation. The dissected doll is spoiled for all time even if the stuffing proves an agreeable surprise, and the katzenjammer hypochondriac who spends her time in dissecting too thoroughly all the symptoms of this direful disease is the one who will have the most difficulty in obtaining relief.

P. W. HUMPHREYS.

Joining Bars

We give in an enlarged form, as shown in the illustration opposite, a clever way of joining embroideries or insertions. If of very fine material use No. 500 linen thread.

Hand to Hand, Heart to Heart

Boys flying kites let soar their white-winged —birds
Do we do that way with our loving words?
Kind thoughts expressed will never fall back dead.
Let us, then, see that they are always said.

We're slow to give our words of praise and cheer
To those in our own homes year after year;
Too oft we give to strangers our best smile,
Though loving home folks most all the while.

We cannot benefit humanity by standing off at arm's length and saying, "You must be good. You mustn't do that. You must do this." Neither can we drive them in a certain direction, no matter how earnestly we may desire it. Humanity can be led, not driven.

In our homes we have humanity in miniature. We fail in our idea of government if we try to coerce by the simple power of our own will. I believe that the majority of children would love to obey if their parents were more judicious in their demands.

One of the loveliest mothers I ever knew, and one who had the most obedient children, never raised her voice above that of her ordinary conversation when giving them a command, and never said "must," but always "may." "Gracie, you may wash the dishes this morning, and Vivian you may make the beds." And the children obeyed as though it were a privilege to do so.

We must let our children know that we trust them, love them, and that we have not a doubt but that they will mind us. We must be the soul of truth and honor in our dealings with them. If we promise them "a good whipping" if they do that again we must certainly administer this same "good whipping" if they do repeat the offense. We must not forget, for they certainly will not. One thread in the warp of authority is broken whenever we fail to keep our word with our children. We may promise candy or peaches if they are good; then let us not fail to give them the treat if they deserve it. If we do not adhere strictly to the truth, how can we expect our children to be truthful?

If we are truthful, cheerful, lovable, gentle, self-controlled and considerate we may expect to mold our children into exquisite young people. We will find them young men and women of unfailing courtesy and of sterling worth.

On the contrary, if we are irritable, nervous, "worrisome," fretful and "nagful" we cannot expect to have quiet, lovable children.

The influences which are molding our dear children while they are very young are to be found in our own homes. Oh, how important that these homes be all they should be! Our children will need all the moral, mental and physical strength they can possibly be imbued with when they come to take their places in the battle of life. They will need well-grounded principles of truth, purity, manhood and womanhood before they leave the parental roof.

I have seen the statement somewhere that "an ounce of example is worth a pound of scolding," and I am inclined to believe it. If we set our children examples of courage, gentleness and devotion to duty and principle we are certainly doing more for them than we will be if we continually find fault with, and scold or whip them.

ELLA BARTLETT SIMMONS.

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We make it easy all the way through, sending your selection subject to examination and approval, guaranteeing safe delivery and prepaying all express charges. We guarantee weights and qualities, absolutely, and will make liberal exchanges at any time. Step into your local bank and ask about our standing in *Dun's* and *Bradstreet's* books of commercial ratings. You will be told that we are one of the largest jewelry-houses in the country and responsible beyond question. Write to-day for our illustrated booklet H, showing styles, prices, etc. Ask for a Lucky Pocket Piece and Calendar. We sell Watches, Jewelry and Silverware of every description on the same easy terms, but if you prefer to pay cash we will give you the regular trade discount of eight per cent.

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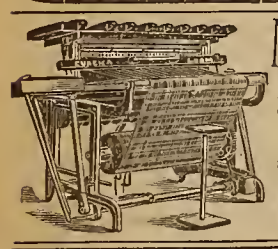

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The Public Schools

WE HAVE long been in the habit of pointing to our public-school system with pride as being the best in the world. While we are doubtless justified in this boast, has not this same pride kept us from seeing some of its defects and seeking to rectify them? It is a fact apparent to all who have looked into the question that the country schools have not kept pace with those of the town. In many cases the interest of both parents and pupils has flagged, and the chief ambition of both seems to be for the children to get away from the country schools and into some city or town institution as soon as possible.

If all the children of the country could do this it would not make so much difference, but the fact remains that in every district there are many who must finish their school education in a country school, and it is for these that the public-school system was chiefly planned, and for these that it should be constantly improved.

Some of the leading educators of the state of Maine several years ago saw the tendency of the rural schools to lose much of their usefulness, and made a comprehensive study of the question, examining the schools of different sections not only as to subjects taught and methods of instruction, but as to school-buildings and their surroundings. The result of these inspections were given to the public, and the attention of the people called to the deficiencies existing and the need of reform. The interest thus aroused resulted in the formation of the School Improvement League of Maine, the object of which is to "awaken interest among pupils and parents and to enlist their active support in the improvement of the rural schools."

All earnest teachers know that character is largely influenced by surroundings, and one of the first objects of the League was to bring about an improvement in the school houses and grounds. One of the most important factors in the success of any work is the harmonious action of all concerned, so teachers, parents and pupils were enlisted and were soon working with common zeal to make their school and its surroundings the pride of the community. Paint and paper made the old and dingy buildings much more inviting. Shades were put at the windows, a few good pictures hung on the walls, and many other improvements made in the interior furnishing. Outside the yards were cleaned up and trees and flowering shrubs planted. Of course, some money is needed for these things, but entertainments of one kind and another are gotten up and a small fee charged, so that the money is soon raised, and all feel that they have contributed toward the improvements. Most of the work is done by the pupils and parents. Being brought together in a common cause adds to the general good-feeling. Improvements and embellishments the children have helped to make they will take pride in preserving.

The work of the League does not stop with the physical appearance of the school-house and its surroundings; it also extends to the course of study. Music and drawing are added, attention is given to fostering a love for good reading, and courtesy and good manners are encouraged by both the precept and example of the teacher. It requires organized effort to reach the best results, and this the League seeks to accomplish by arousing the interest of the whole community.

To convince one of the good results of the League one has but to compare the rural schools of to-day where it has been in operation with the state of affairs prior to its organization. The interest of the people is aroused, and it is believed that the good work of the School Improvement League is only just begun. What has been done in Maine can be done in other states. If Maine can point the way to a higher educational standard, mentally, morally and physically, for our rural schools she will have proved her right to her motto—Dirigo.

MAIDA McL.

Steamed Brown Bread

Two cupfuls of graham flour, one cupful of corn-meal, two thirds of a cupful of molasses, one third of a cupful of brown sugar, one cupful of sour milk, one cupful of sweet milk, one cupful of seeded and chopped raisins, two teaspoonfuls of soda and one teaspoonful of salt. Stir thoroughly, and put in a greased pan. If steamed in one large loaf it will require three hours' steaming. Do not raise the lid of the steamer while the loaf is in it, and do not allow the water to stop boiling. Put in the oven for fifteen minutes after taking from the steamer.

HOPE DARING.

Starved to Death

HELP THAT CAME TOO LATE

"The Carisbrooke Castle, arrived in from the West Indies, reports picking up a raft with the body of an elderly man who had evidently died of starvation. There was no clue to the man's identity, nor any marks to determine the origin of the raft."

In those few lines another clueless mystery of old ocean was disposed of. There was nothing to marvel at that a man should die of starvation. Had he lived it would have been a real marvel indeed. Or had he died of starvation surrounded by abundant food, that would have been both a marvel and a mystery to the world at large. For the world at large does not know that a great many elderly people die of starvation in the midst of plenty. They have food enough, but the stomach is "weak" and the food cannot be digested and converted into

nutrition. The body grows weak, as every starved body does. And at last the life is destroyed by some commonplace malady, which would have been easily thrown off by a well-nourished body. It is because death in such cases is attributed to the trivial malady and not to the true cause—starvation—that there is no general appreciation of a common cause of disease and death among elderly people—lack of nutrition.

VIGOROUS OLD AGE

depends upon the capacity to digest and assimilate food. Strength in age has the same foundation as strength in youth—food properly digested and assimilated. There is no way to make physical strength except from food. And when the stomach and its allied organs, because of "weakness" or disease, cannot convert the food into nutrition, there is a loss of strength and vitality, which weakens the body and leaves it practically powerless against the inroads of disease. If you want strength you must get it from food, and you can't get strength from food when there is disease of the stomach and other organs of digestion and nutrition. The way to vigorous age, then, is to strengthen the stomach by curing the diseases which weaken it. This is done by the use of Dr. Pierce's Golden Medical Discovery.

"I suffered for six years with constipation and indigestion, during which time I employed several physicians, but they could not reach my case," writes Mr. G. Popplewell, of Eureka Springs, Carroll County, Ark. "I felt that there was no help for me; could not retain food on my stomach; had vertigo, and would fall helpless to the floor. Two years ago I commenced taking Dr. Pierce's Golden Medical Discovery and little 'Pellets,' and improved from the start. After taking twelve bottles of the 'Discovery' I was able to do light work, and have been improving ever since. I am now in good health for one of my age—60 years. I owe it all to Dr. Pierce's medicines."

Dr. Pierce's Golden Medical Discovery is not offered as a "cure-all." It does cure a great many different diseases, but a study of these cures shows that the various diseases of heart, liver, lungs, kidneys, blood, etc., cured by "Golden Medical Discovery" are diseases which had their origin in the disease of the stomach and other organs of digestion and nutrition. When the cause of disease was cured in the stomach, the effects of the disease were cured in the other organs.

MEDICAL FALSE PRETENSIONS

When a medicine is offered as "blood-making" or "strength-giving," ask yourself, Out of what is blood made and what is the source of physical strength? Blood may properly be said to be only digested food. Food is the source of all strength when, by the digestive processes, it is converted into blood, which is the life of the body. No medicine can make a drop of blood. No medicine can give an ounce of strength. Blood and strength must come from food, and the only sense in which Dr. Pierce's Golden Medical Discovery is called a blood-making and strength-giving medicine is in that it cures the diseases of the stomach and other organs of digestion and nutrition, and enables the food eaten to be converted into the blood and nutrition on which the life and strength of the body depend. By this means it gives new life and new strength.

"I take time to ask you to allow me to thank you for the good your medicine has done me," writes Mrs. Francis Johnson, of Dresden, Pettis County, Mo., Box 71. 'I am more than glad to tell you I have better health now than ever before. After using three bottles of Dr. Pierce's Golden Medical Discovery, one of 'Favorite Prescription' and one vial of Dr. Pierce's Pleasant Pellets, I am strong and hearty. I have no more bad spells; no more weakness. I feel like a new woman altogether. I could not have lived much longer in the condition I was in if I had not seen that advertisement just in time to save my life. Thanks to you, and I thank God for letting my eyes look on your advertisement. I am continually telling my friends I would not have been living if it had not been for Dr. Pierce's medicines."

What "Golden Medical Discovery" does for the diseased stomach in advanced life it does for youth and for men and women at every stage of life's progress. It makes the "weak" stomach strong. It enables the perfect digestion and assimilation of food, so that the body is made strong in the one possible way—by food properly digested and perfectly assimilated.

FAR-REACHING BENEFITS

Acting through the stomach and blood, Dr. Pierce's Golden Medical Discovery reaches every organ of the body. It strengthens the "weak" heart—stirs up the sluggish liver, heals the inflamed lung tissues, stimulates the kidneys and brings all the physical organs into harmonious activity. It cures biliousness and the headache and lassitude which are common to bilious people. It builds up the body with sound flesh and solid muscle.

Sick people are invited to consult Dr. Pierce, by letter, *free*. All correspondence is held as strictly private and sacredly confidential. Address Dr. R. V. Pierce, Buffalo, N. Y.

Sometimes the dealer, tempted by the little more profit paid by the sale of less meritorious medicines, will endeavor to sell the customer some unproved remedy as being "just as good" as Dr. Pierce's Golden Medical Discovery. Judged by its cures there is no medicine as good for diseases of the stomach as "Golden Medical Discovery."

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Dr. Pierce's Common Sense Medical Adviser is sent free on receipt of stamps to cover expense of mailing *only*. Send 21 one-cent stamps for the book in paper covers; or 31 stamps for the cloth-bound volume. Address Dr. R. V. Pierce, Buffalo, N. Y.

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If I Can Live

If I can live
To make some pale face brighter, and to give
A second luster to some tear-dimmed eye,
Or e'en impart
One throb of comfort to an aching heart,
Or cheer some wayworn soul in passing by.

If I can lend
A strong hand to the fallen, or defend
The right against a single envious strain,
My life, though bare
Perhaps of much that seemeth dear and fair
To us on earth, will not have been in vain.

The purest joy,
Most near to heaven, far from earth's alloy,
Is bidding clouds give way to sun and shine,
And 'twill be well
If on that day of days the angels tell
Of me, "She did her best for one of Thine."
—Helen Hunt Jackson.

An Ancient Strike

WE SOMETIMES think of the so-called labor troubles, which are such a hurt and menace to our civilization, as altogether a modern product—the outgrowth of conditions peculiar to our own times. But there is at least one record of a strike at a very ancient period.

In one of the departments of the British Museum are several cases of letters and documents belonging to an exceedingly remote antiquity. In appearance they are as different as possible from anything of the kind with which we are familiar. In fact, one would scarcely suspect that they were letters at all—these odd, pillow-shaped little cakes of yellowish-brown clay, covered with queer scratchings.

Most of them are dispatches from kings of Mesopotamia and governors of cities in Syria and Palestine to Amenophis III., and his son, Amenophis IV., who were kings of Egypt as long ago as 1450 B.C. They were scratched on tablets or cylinders of soft clay or mud, which were then baked to a durable hardness before being conveyed to their destination. Some of them accompanied valuable gifts of bronze or gold, horses, chariots or lapis lazuli, not infrequently asking, with amusing ingenuousness, for presents in return. Others are protestations of friendship so earnest as by their very fervency to suggest suspicions of their sincerity, or at least of their disinterestedness. Others, still, are almost childishly jealous complaints of lack of partiality in favors conferred or laments regarding domestic difficulties.

But one of the most interesting is a letter from the Governor Shum Adda to the King of Egypt, acknowledging the receipt of a dispatch, and informing him that he has been unable to supply the grain required by the king, because the men who thresh corn have driven away their overseers and refuse to work.

"The world goes round and round and round," as the poem runs. Whether history records any strike more ancient than this of the fifteenth century before Christ or not I do not know. But surely one who turns from this curious old letter to the pages of a modern newspaper must be brought once again, and very forcibly, to the reflection that "there is no new thing under the sun."
—Mary S. Daniels, in Epworth Herald.

How to Get On

When George Peabody, the millionaire and philanthropist, visited his native place in 1855 he said to the young men of the village: "Though Providence has granted me unusual and unvaried success in the pursuit of fortune, I am still in heart the humble boy who left yonder unpretentious dwelling. There is not a youth within the sound of my voice whose early opportunities and advantages are not much greater than were my own, and I have since achieved nothing that is impossible to the most humble youth among yon."

I have no hesitation in saying that most eminently successful men have commenced life under unfavorable conditions. The difficulties stimulated their energies and brought out what was in them. It is rather the exception than the rule that a youth brought up under all manner of advantages, as regards wealth and rank and education, has, by dint of pluck and perseverance, forced his way to the front and commanded brilliant success.

How easy to give you a list of notable men who, starting from the humblest ranks, and without a sixpence in their pockets, managed, by sheer thoroughness and perseverance, to reach a high position on the ladder of fame! The immortal Homer began life as a beggar; Aesop was a slave; Demosthenes, the son of a sword-maker; the poet Akenside was a butcher's boy; Jeremy Taylor was the son of a barber; Ben Jonson, a bricklayer; Hugh Miller, a mason; Doctor Livingstone, a factory-worker; Faraday, a bookbinder's apprentice; Doctor Kitto, a shoemaker. Why, I might multiply the instances to almost any extent.

Make good use of the talents God has given you, be they great or small; apply your whole energy to the business you have in hand, and look up for the divine blessing on your toil; do this and—no fear of you!—Thain Davidson, D.D., in the Preacher's Magazine.

Self-cultivation

It happens to many a man and woman that in the absorbing demands of business or professional life, of home duties or the claims of society there is a gradual failure of moral purpose or religious convictions, and while the life grows in one direction it as surely degenerates in another. We can cultivate any part of our natures we will, just as the gardener or horticulturist by selecting certain qualities gradually develops a new kind of potato or corn, a new variety of strawberry or apple. We can make ourselves new kinds of men and women by giving attention to business or pleasure, books or music, athletics or religion. Spiritual things are not of interest to us where we do not cultivate them, just as business becomes dull if we do not give attention to it and try to make it interesting. As no man can be strong unless he takes much exercise, so no man can be devout who does not wrestle with God in prayer, early and late.

Every kind of cultivation leads to growth in manhood, and we are the kind of men we make ourselves by our toil and our play, our hopes and our fears, our fidelity of mind and our loyalty of heart. When the mind is open and alert, the heart gentle and loving, the conscience firm and unfailing, the will strong and steadfast, we are sure to grow into larger manhood and womanhood, and there is nothing else for the sake of which life is worth living. Truly it is a good and acceptable saying that "the only object in life is to grow."—Christian Register.

The Clock's Two Hands

"Come, hurry up!" said the second-hand of a clock to the minute-hand; "you'll never get around in time if you don't. See how fast I'm going," continued the fussy little monitor, as it fretted round on its pivot.

"Come, hurry up!" said the minute-hand to the hour-hand, utterly oblivious of being addressed by the second-hand. "If you don't be quick you'll never be in at the stroke of one."

"Well, that's just what your young friend has been saying to you."

At this point the clock pealed forth the hour as the hour-hand continued, "You see we're in time. Not one of us behind. You take my advice—do your own work in your own way and leave others alone."

Moral—Mind your own business.—United Presbyterian.

Mixing Faith With Prayer

How listlessly, formally and with what little faith do many of us pray—for ourselves and for others. And yet with what boldness ought we to come to the Master's feet.

A child asked once, during revival services, that the people would pray for the conversion of his sister. The preacher was struck by his appeal, and called the congregation at once to prayer. As they were kneeling it was noticed that their suppliant was reaching for his hat and about to take a speedy departure. "My little friend," said the preacher, "you have asked us to pray for your sister, and you ought to remain and pray with us."

And the child's reply was, "I am going to see how bright her face will be when she is converted."—Michigan Christian Advocate.

DOCTORS ENDORSE SWAMP-ROOT

To Prove What Swamp-Root, the Great Kidney, Liver and Bladder Remedy, Will Do for YOU, Every Reader of the Farm and Fireside May Have a Sample Bottle Sent Free by Mail

A. J. HAILE, M.D.

EAST ATLANTA, GA., March 1, 1901.
DR. KILMER & CO., Binghamton, N.Y.:
GENTLEMEN—While it has never been my habit or inclination to recommend remedies the ingredients of which are not all known to me, it seems as if I should make an exception in the case of Dr. Kilmer's Swamp-Root. My experience, so far as I have tested it in my practice, forces me to the conclusion that it is a remedy of the greatest value in all kidney, liver, bladder and other inflammatory conditions of the genito-urinary tract. I now take pleasure in prescribing Swamp-Root in all such cases, with a feeling of assurance that my patients will derive great benefit from its use. I shall continue to prescribe it in other cases in my practice with the expectation of good results.
Very truly yours,
A. J. Haile M.D.

GENTLEMEN—I have prescribed that wonderful remedy for kidney complaint, Dr. Kilmer's Swamp-Root, with most beneficial effect, and know of many cures by its use. These patients had kidney trouble, as diagnosed by other physicians, and treated without benefit. Dr. Kilmer's Swamp-Root effected a cure. I am a liberal man and accept a specific wherever I find it, in an accepted school or out of it. For desperate cases of kidney complaint under treatment with unsatisfactory results, I turn to Dr. Kilmer's Swamp-Root with most flattering results. I shall continue to prescribe it, and from personal observation state that Swamp-Root has great curative properties.
Truly yours,
L. Barlow Smith M.D.
276 9th St., Borough of Brooklyn, N. Y.

The mild and extraordinary effect of the world-famous kidney, liver and bladder remedy, Dr. Kilmer's Swamp-Root, is soon realized. It stands the highest for its wonderful cures of the most distressing cases.

Weak and unhealthy kidneys are responsible for more sickness and suffering than any other disease, therefore, when through neglect or other causes, kidney trouble is permitted to continue, *fatal results are sure to follow.*

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Diana's Wedding-Dress

BY L. M. MONTGOMERY

Diana was sewing by the open window of the gable room, and now and then glancing out across the bay with a musing smile and a light in her blue eyes that spoke of pleasant thoughts.

The little gray house, tanned by many years of wind and storm, was built almost on the very edge of the bay shore. Curtain Point was lonely and out of the world said the people who lived up at the village two miles away. But Diana never thought it so. To her it was a world in itself—a beautiful, beloved world.

It was a gray day, with a brisk wind blowing around the eaves, switching harmlessly over Diana's smooth brown braids and having its customary tussle with the few stunted little spruces that grew at the southeast corner and had wrestled with it every day of their sturdy lives. The wind was offshore, and only served to break the bay's surface into long, silvery ripples and send sheeny shadows flying out across it from every point and headland like transparent wings.

Far out it was rougher, and Big and Little Curtain Islands were long, dark blots in the mist. On a sunny day they loomed up clear and purple, deep-dented with shadows in their inlets.

Beyond the headland that ran out between Curtain Point and the harbor rose up the ghostly white tower of the lighthouse that in the evening would hold out its great lamp against the northeastern sky, and below it were visible the masts of the vessels at anchor in the harbor.

One was missing which had lately been there. Three days before this the "Three Sisters" had spread her white wings and sailed away into the gold and crimson and pearl of a sea sunset. Diana had watched her across the bar and far out into the great gulf. "Young Cap'n Martin" sailed with her, and young Captain Martin was Diana's lover. When the "Three Sisters" should return from her West-Indian port there was to be a wedding in the gray farm-house at Curtain Point, and Diana would go with her sailor-husband to live in Nova Scotia.

Two letters were lying on the writing-table in the corner. One was addressed to a far-away port with a strange, tropical name; the destination of the other was nearer home, for it had been written to Jean Churchill at Charlottetown. Jean was Diana's dearest girl friend, and Diana had invited her to spend July and August with her at Curtain Point. She was sure that Jean would come, and she was looking happily forward to her visit.

Presently Mrs. Page came up to Diana's room with her motherly face aglow from her drive around the harbor and through the village. She was tired and somewhat blown, but before she sat down or even loosened her bonnet-strings she picked up Diana's sewing and looked it over critically. Then she returned it with a nod of satisfaction.

"Very neat. Even Grandma Page herself couldn't have found fault with it, and she was the most particular soul about her fine sewing that ever lived."

Diana smiled. She dimly remembered Grandma Page as an old lady with sharp black eyes and snowy curls and caps, who used to set a very little girl very long seams to sew, and was extremely hard to please in the sewing of them.

"I suppose Grandma Page's drilling is bearing fruit now," she said. "But how I used to hate to sit and sew when I wanted to be building sand castles down on the shore! Were you at the store, mother? And have they any organdie?"

"None fine enough," said Mrs. Page, decidedly. "I asked to look at some, and Abi Jackson brought out some pieces he called fine. I didn't look at 'em twice. We'll have to go to town for your wedding-dress. I've got just the right thing in my mind's eye—white organdie, sheer and fine and soft as a cobweb. That'll be the stuff to put your fine, Grandma-Page sewing on."

"I wish," said Diana, wistfully, "that I could have a silk dress, too. It doesn't seem as if one could be legally married without a single silk dress in her trousseau at all."

She and Mrs. Page both laughed, but the latter said, soberly, "I wish we could get one for you, child. I always meant that you should have one. But we can't afford it. That sick spell your father had in the spring—"

"Oh, I know," cried Diana quickly. "Don't worry, mother. Don't I know you'd give me a dozen silk dresses if you could. And I dare say a cloth one will be just as nice if I could only think so. I will think so after awhile when I get that old silk-dress dream rooted out of my heart. You see, it's been there so long—ever since I was ten years old. I was down at the harbor the day Cap'n Joe brought 'The Pearl' home from South America, and 'Siah Meeks, the first mate, bought his daughter a silk dress. It was the loveliest thing I had ever seen—a beautiful silvery-gray just like those shadows out there. And I thought to myself, 'When I grow up I'll have a silk dress just like that, too.' Well, I shall have to live in hope awhile longer."

"Speaking of Cap'n Joe," said Mrs. Page, "your father and I were talking to him down at the harbor this afternoon. The poor old man is in sad trouble. He has never been able to do any work since he had his leg reset last fall, and he has nothing to live on. His poor little savings all went when the Wilson Bank failed two years ago. Now there's nothing for him to do but go and live with his brother in Nova Scotia. His brother wants him to go, but he lives fifty miles inland, and Cap'n Joe says he don't know how he can live away from the sea. You could see he was just heart-broken at the thought of leaving the harbor. He looks old and frail, and I believe it will finish him right off."

"Poor old Cap'n Joe," said Diana, sympathetically. "It's a shame. Surely some of the harbor folks might give him a home for the little time he has to live."

"Well, I suppose they all think they have enough to do without that. They're all poor together. And then you see, Cap'n Joe has always been a kind of keep-to-himself sort of man—never made any friends among the younger shore folks, and all his old mates have gone. But he likes to potter around shore and tell and hear stories and give advice. It made me sorry to hear him talk.

He unlocked the old blue chest and knelt stiffly down before it

"Don't cry, leetle gal," said Cap'n Joe, huskily, "I've something here for you"

Coming home your father and I talked it over a bit. We agreed we might have Cap'n Joe come here and end his days in comfort, but I said we must leave it to you to decide."

"To me! Why, mother, of course I'd be glad—"

"Wait, dear. You know we've only the one spare room in this hut of a house. If Cap'n Joe comes he must have it, and Jean can't come for her visit. That is why I hesitated."

Diana looked blankly at her mother. She had not thought of that. Of course, if Jean came she must have the spare room. Diana shared her tiny one with two small sisters.

"Oh, mother, I'm so sorry! But I must have Jean! She's expecting the invitation, you know—and it's my last summer home—and I've planned so much—"

"Yes, I know, child. That's just what I told your father. I knew your heart was set on having Jean here, and I wasn't going to have you disappointed. We needn't mention the subject again. Cap'n Joe doesn't know we thought of it, so no harm's done. And now I must go and get the tea, for those two wee girlies of mine will be home from school soon, as hungry as bears. I shall have to be extra good to them if you're going away to leave us. Dear heart, what will mother do without you?"

But Mrs. Page's motherly words and kiss brought only a very misty smile to Diana's troubled face. When her mother had gone she put a few stitches in her tucks that would not have pleased Grandmother Page, and then she pushed her sewing impatiently away, and dropping her chin into her slender brown hands looked musingly out across the bay, which was growing rougher, for the wind was backing around to the northeast, and the fishermen at the harbor were looking anxiously out across the bar.

"I cannot give up Jean's visit?" said Diana aloud, with such emphasis that she almost frightened the life out of a tiny cliff-swallow that had alighted for a moment on the window-sill.

She picked up her sewing resolutely, but she could not keep from thinking about Cap'n Joe. How kind the gruff old sailor had always been to her from the first day that she had toddled around to the harbor with her father, and Cap'n Joe had taken her on his knee and held his big spy-glass for her to look through. Ever after that she was a favorite with the old man. He would tramp alongshore with her, lifting her over the rocks and making a nest of his greatcoat for her when she grew tired. He told her long stories of strange countries he had seen, and showed her how to make sand castles, and funny little dolls out of raveled ropes. And whenever Cap'n Joe came home from a voyage he always brought something for Diana—a quaint, inlaid box, perhaps, or big striped and spotted shells or a basket woven of scented grass.

Before Diana went to the post-office that night she stood for a long while before her writing-table. When she finally started she took only one letter.

"Mother Page," said Diana that night, "I've been thinking, and I didn't mail Jean's letter. You can go and bring Cap'n Joe here to-morrow."

So Cap'n Joe came to the gray farm-house at Curtain Point with his big blue chest, so old that the blue had almost all worn off—a queer, twisted little man with a face as brown and wrinkled as a walnut-shell. His joy and gratitude were so pathetic that Diana felt a little thrill of remorse to think that she could ever have hesitated over the question for a moment.

"I'm so glad I didn't send that letter to Jean," she told her mother.

The long, bright summer days passed swiftly, and on the last day of August the "Three Sisters" came sailing up the harbor in the splendor of the sunset, just as she had gone away, with her sun-burned young captain on her deck. The very next morning Diana began to make her wedding-dress.

It was of organdie, fine and dainty enough to delight the heart of any bride. Mother and daughter made it together in the little gable room, and all the love and good wishes and fair hopes that were stitched into it made it very precious. The last touches were put to it one evening when the sun was setting behind Little Curtain Island, and Diana laid it on the bed, pulling out the crisp ruffles carefully and lovingly.

"After milking I'll put it away in the long box," she thought, as she went down-stairs.

Diana was washing her milking-pails at the kitchen door, and Cap'n Joe, who had just got home from the harbor, was telling her about the mackerel-catch, when a frantic little shriek came pealing down the stairs.

Everybody ran—Diana and Cap'n Joe and Mrs. Page, who had been folding up Diana's sheets with lavender in the linen-closet, and Nellie, who had been working arithmetic by the hall window—but Diana had gotten up-stairs first.

Caddie was standing by the bed with a scorched counterpane in her arms. The child was sobbing convulsively. On the bed lay some black, smoldering scraps of lace and organdie—all that remained of Diana's wedding-dress.

"Caddie!" cried Mrs. Page. Diana did not speak. With a helpless little look at the ruins she sat down on the nearest chair and burst into tears.

"Oh, I didn't mean to!" sobbed Caddie. "I'm so sorry! I came up here and lit the lamp and I threw away the match. I thought it was out—but it wasn't—and it fell right on the dress, and it all caught fire at once in a puff. I threw the counterpane over it, but it was no use—and I've burned my hands—and oh, Diana, do please forgive me!"

"You careless child," groaned Mrs. Page. "How often have I told you never to throw away a match like that! You've burned up your sister's wedding-dress, and what's to be done I don't know. Well, your hands must be attended to first, I suppose. There, there, child, don't cry so. You've been very careless, but the thing is done, and scolding and crying can't mend it now."

Caddie was led sobbing away, but Diana laid her head on the table and cried. She knew very well that another white dress as fine and beautiful as that could not be afforded, and she was to be married in a week's time.

Meanwhile old Cap'n Joe had hobbled down-stairs as noiselessly and quickly as he could. In his own room he unlocked the old blue chest and knelt stiffly down before it.

"Leetle gal's dress burned up, is it?" he muttered to himself. "Well, this is where Cap'n Joe gets his fine work in. Thinks Cap'n Joe don't know how he come to get here, does she? Thinks Cap'n Joe don't know how she gave up her leetle friend's visit so's a poor old useless bit of wreckage could be stranded safe here, bless her! Cap'n Joe has eyes and ears yet. We'll see!"

He chuckled gleefully as he turned out the contents of the chest—a queer assortment enough, the flotsam and jetsam of a long seafaring life. Down at the very bottom was a neat parcel done up in strong brown paper. Cap'n Joe nodded and picked it up with a smile. Then he hobbled up-stairs again.

Diana felt a touch on her shoulder, and looked up.

"Don't cry, leetle gal," said Cap'n Joe, huskily, "I've something here for you. I brought it home long ago for my leetle gal. You don't remember her—no, she died 'fore you was born. Her mother was my sister. Her man was drowned in the August storm, and she died of a broken heart and left a leetle scrap of a baby. That was my leetle gal. She lived with her grandmother, but I looked after her. She had big blue eyes and brown hair like you. You al'ays 'minded me of her. Every time I came home from a v'yage there she'd be at the wharf waiting for 'Uncle Joe'—a bit bigger and purtier every time, till at last I come home and found my leetle gal was a woman. 'Twas then I promised her the finest new dress I could find next v'yage I made. When I sailed away she stood on the wharf and waved to me till we was out o' sight. But when I come back there weren't any leetle gal waiting for me."

The old man's voice broke. Diana stroked his gnarled hands gently. He pushed the parcel into her lap.

"I'd brought that home for her 'cording to promise. It's been lying there in my box ever since. It's for you."

When Mrs. Page came up to condole with Diana she found the latter sitting flushed and happy-eyed over an open parcel in her lap.

"Look, mother," she said, softly.

There was a roll of embroidered muslin lying in it, ivory-tinted from age, but so fine and delicate that a queen might have worn it proudly, and beside it was another roll of silk, silvery-gray and beautiful, fragrant with some strange spicy perfume that had kept its sweetness through all the years.

"Well, Diana Page! where did that come from? Are there fairies around?" asked Mrs. Page.

"No fairy, only dear old Cap'n Joe. He has given them to me. Oh, mother, aren't they beautiful? I shall have my silk dress after all, and just the very silvery-gray I've dreamed of."

"Well, you're in luck, Diana, I must say. Why, that embroidered muslin must have cost a small fortune. It's awful yellow, to be sure, but it can be washed and bleached and done up after Grandma Page's receipt, and you'd never tell it had touched water. And that silk—'tisn't a bit old-fashioned, for all 'twas got so long ago. It'll have to go straight to the dressmaker to-morrow. We'll have to bestir ourselves to get that muslin made up in time."

"Dear old Cap'n Joe," said Diana, dreamily. "I think that just to be married in a gown with such a dear, sweet history will bring a blessing. It stands for so much love and tenderness."

Down-stairs in the little spare room Cap'n Joe sat by the window and looked out at the great lambent star of the lighthouse.

"Dear leetle gal," he murmured. He meant Diana, but he was thinking, too, of the little blue-eyed lassie who used to meet him when his ship came home, long ago, and who had been sleeping in the little harbor graveyard for so many years.

Mothers alone climb Joy's most rapturous heights,
Here, too, they touch the heart of love divine.
O Father, God, how very good thou art
To grant us joy that else were only thine.
A partnership with God is motherhood.
What strength, what purity, what self-control,
What love, what wisdom, should belong to her
Who helps God fashion an immortal soul!

—Mary Wood Allen.

Ted's "Very Good Friend"

BY W. BERT FOSTER

MR. CASTLEMAN came hurriedly out of the library and met Ted loitering down the stairs. Ted had been wandering about the house all the morning, for it was a lowery, drizzly day outside, and there is nothing attractive in the city streets for even a country boy on such a day. The forenoon hours had thus far hung very heavily on his hands.

"Theodore!" exclaimed his uncle, "I was just going in search of you. I am obliged to go out of town—"

Ted's face lit up suddenly, but fell again as Mr. Castleman added, "But it is not a place to which I can take you, I am sorry to say. My friend Myrick has telegraphed me he is ill, and that he wishes to see me at once. I must go, and shall leave you alone here."

"Oh, well," responded Ted, trying to speak cheerfully. "I dare say I'll do very well. You won't be gone long, will you, Uncle?"

"Over night, I expect. Longer than I wish to be away just now." Mr. Castleman stood hesitating at the library door with his hand on the knob. "Yes, much longer than I wish," he repeated.

"Don't you worry about me, Uncle. I'll get on all right," said Ted, decidedly.

"I don't doubt it, my boy," returned Mr. Castleman. "You're usually very well able to care for yourself. That isn't what worries me."

"Anything I can do—"

"Come in here, Theodore," interrupted Mr. Castleman suddenly, "I've something to show you."

His nephew followed him into the library in some wonderment. The room was almost completely lined with book-shelves. At the further end was a high mantelpiece and grate, and beside them, built into the bricks, was the door of a safe. Mr. Castleman led him to this, opened the heavy door, and from the depths of the closet brought out a small japanned cash-box with a padlocked lid. This he opened with a key, which hung upon his key-chain.

"See here, Theodore," he said, displaying the contents of the box. "Those are your aunt's jewels. I brought them home from the Safe-Deposit Company's vaults this morning to clean them. I always clean them myself, for we trust them to no jeweler. In fact, they are more of a nuisance to us than a pleasure, and if it wasn't that many of them are heirlooms we should be glad to get rid of them.

"But they are on our hands. We can't bring ourselves to sell them, and they must be cared for. They are very valuable. You don't often see settings like these nowadays.

"That isn't the point, however. I expected to clean them this afternoon, and return them to the Safe-Deposit Company in the morning. But I am called away. I must go, for there's no telling how ill Myrick may be. I can't get these things back into safe-keeping to-day, for the banks are already closed. And I don't wholly trust this old safe. It's fire-proof fast enough, but an old woman with a pair of scissors could pick the lock in two minutes. We seldom keep anything of value in it excepting papers.

"Now, I want you to bear in mind the fact that this box is here. Don't go out of the house until I get back. I shall return some time to-morrow, sure. Nobody will call—at least, I expect nobody—so you won't be troubled by visitors, and will be able to look in here occasionally and see that no one is tooling about the safe door. Of course, the servants are honest, but—"

"I see. You're worried, Uncle," said Ted. "I'll keep watch. Don't you fret a mite. Nothing will happen to 'em while I'm 'round," and he swelled a bit with importance.

"Oh, you needn't confine yourself to this part of the house, but just bear the matter in mind," said Mr. Castleman.

He locked the casket in the safe again, and a little later departed. Master Ted was more than proud at being taken into his uncle's confidence and at having been practically left on guard. For an hour or two he stayed right there in the library with his eyes glued to the safe door.

But that grew monotonous after awhile. He appreciated the confidence his uncle had placed in him, but there seemed to be no good reason for watching the safe as though it might fly open of its own accord and display the jewel-box to any curious eye. So he took up his wanderings again from room to room and from floor to floor. It was a dull day.

In one of his gyrations he happened into the side hall leading to the servants' common entrance, and there he spied Jerry, the under butler, just putting on his coat to go out. Jerry and he were, in a surreptitious way, very good friends. Mr. Castleman did not wish his nephew to be familiar with the serving-people, but Jerry had knocked around the globe a good deal and had the most astonishing stories to tell. He'd been, by his own account, a soldier in the Soudan, and wore an honorable scar as a memento of the campaign against the dervishes.

"You going out, Jerry?" asked the boy, longingly.

"That Hi am, my little man," replied the butler's assistant. "Hi'm goin' on an errand for Mr. George." (Mr. George was the old butler, who had been in the house for a generation.) "Hanything I can do for you, sir?"

"I guess not, Jerry, unless you bring pleasant weather home with you."

The man went out laughing, and Ted wandered up-stairs again, after a casual glance at the library safe, and established himself with a book in one of the windows of the upper hall. There Margaret found him half asleep an hour later.

"Master Theodore," she said, "there's somebody inquiring for you down-stairs."

"Who is it, Margaret?" demanded Ted, jumping up with alacrity.

"An old gentleman, sir," responded Margaret, evidently smiling at some remembrance of the visitor.

"What's the matter with him?" inquired Ted, smoothing his rumpled hair hurriedly.

"Why," said the girl, "he asked for Mr. Castleman, an' when I told him he wasn't in, why, he asked were any of the family in, so I told him you were here, an' he asked could he see you. So I undertook to show him into the reception-room, sir, but he misunderstood me an' went the other way, opening the library door. I didn't want to hurt the old man's feelings, so I let him sit down in there. He is really a very queer old party, Master Theodore."

"All right, Margaret. I'll go down right away."

He found the visitor sitting in a chair pulled close up to the library grate. He was a most benignant-looking old man, with a long, gray beard, and was dressed in a shabby though most respectable suit of black!

"My dear young friend!" he exclaimed, rising upon Ted's approach, "Hi 'ope Hi find you well?"

Ted assured him that such was the case, and politely asked his business.

"Hi 'oped to see your uncle han' interest 'im in my cause," said the visitor, in an accent which plainly betrayed his nationality. "Hi am a missionary, at 'ome on a furlough—er—so to speak, han' your uncle was pointed out to me a man of means whose interest in missionary hentaprises was well known."

"I am very sorry my uncle is not in," said Ted, puzzled that something about the old man's speech should seem so familiar to his ear.

"Well, has 'e his not Hi thought Hi would see you han' strive to gain your attention."

"I'm sure—" began Ted.

"Let me tell you of my people," said the old gentleman, stroking his long beard. He hitched his chair nearer to the grate, and pulled his coat closer about him.

"I beg your pardon, sir," said Ted. "Are you cold? Would you like a fire?"

"Well—er—my dear boy, if hit's not too much trouble. You see, livin' so long in a 'ot climate—"

Ted was down on his knees at once, and lit the gas-logs.

"That his more comfortable," declared the visitor. "You har very kind." He spread his gloved hands before the blaze. Then he plunged into an account of "his people," as he called them, and soon Ted was as deeply absorbed in the account as ever he had been in Jerry's stories of adventure in the Dark Continent.

In fact, the visitor did not talk just as Ted expected a missionary would. There was very little in the narrative regarding the "work" the old gentleman had accomplished among the blacks, but perhaps that was because he had a boy to deal with, and knew a boy's likes and dislikes along the line of story-telling. Ted became vastly interested in the tribe among whom the old gentleman had "labored." When his visitor intimated that any little contribution would help along the cause, the boy put a dollar-and-cent valuation upon his interest and ran up-stairs to examine the contents of his purse.

When he came down ten minutes later with two silver dollars (a generous half of the spending-money in his possession) the missionary was standing by the library-table with his hat on, ready to depart. While Ted had been absent he had evidently removed his gloves, for he was now hastily drawing them on again.

As the boy came forward with his contribution he saw, with a start of surprise, that there was a scar on the missionary's right wrist very similar to that on the wrist of Jerry, the under butler. But the old gentleman fastened his glove and accepted the two dollars with overwhelming thanks.

"My dear young friend!" he exclaimed, patting Ted's shoulder, "you har a boy hamong a thousand—hamong ten thousand Hi might say. Hi am delighted to 'ave found one so young moved by the needs of my people. Believe me, my dear boy, to be your very good friend and well-wisher."

In fact, Ted was quite embarrassed by the missionary's overpowering gratitude. He went with him to the street door, where Margaret let the old gentleman out with a very mischievous smile. The last thing the benignant old gentleman did was to pat Ted on the shoulder and declare again that he should always be "his very good friend and well-wisher."

Ted awoke in the middle of the night with a keen remembrance of the jewels in the safe in the library. So strongly did his forgetfulness impress him that he slipped on his dressing-gown and ran down to the library. Everything was still, and the electric-light on the corner shone into the room in a most ghostly manner. So he shivered a little and went back to bed.

His uncle returned in the morning at a very early hour and in anything but a pleasant state of mind.

"I suppose somebody calls it a practical joke," he said, laying aside his coat in the library, "but I see nothing humorous about it. Why will people be so shallow? I found Myrick as well as ever he was in his life."

"Why—what—why did he telegraph you?" asked Ted, hesitatingly.

"He didn't. Somebody played a silly joke. And there I left home and went 'way up to Myrick's for nothing! I never was so vexed! Has everything gone all right? Did you bear in mind the safe here?"

Ted blushed a little. "Er—er—pretty well," he stammered.

His uncle smiled. "I didn't expect you to sit here and watch it all the time. Any callers?"

"Only the old missionary."

"Missionary, eh? Who was he, I wonder."

Ted at once entered into a voluble account of the old gentleman and his story. Meanwhile Mr. Castleman unlocked the safe and reached into its depths for the jewel-box. Suddenly his nephew's narrative was brought to a startled close.

Mr. Castleman stepped hastily back from the safe, holding the japanned box in his hand. The padlock and hasp had been wrenched off; the box was empty!

Poor Ted fell into a chair and fairly gasped for breath. But after his first exclamation at the discovery Mr. Castleman was very quiet and self-possessed.

"Tell me what happened after I left yesterday," he commanded; and Ted, after some thought, gave him a pretty clear and correct account of the proceedings of the rather dull and lonesome day and evening.

"So the old gentleman was brought in here, was he?" asked his Uncle. "And you left him alone for a few minutes while you went up-stairs for your contribution to his missionary fund?"

"Yes, sir; but I didn't think—"

"No, of course you didn't. How should you? But I fear that your two dollars will never help the natives of Central Africa. And the jewels have gone with your contribution. Was there anything about the man which might mark him? Anything that would lead you to recognize him again?"

Ted gave a detailed account of his visitor's appearance.

"Beard undoubtedly false," commented Mr. Castleman. "Whole appearance a probable 'make-up.' I fear, Theodore, that your knowledge of missionaries and their methods is extremely limited. Anything else?"

"Only that he had a scar on his wrist like Jerry's."

"Who is Jerry?"

"Why, the footman—Mr. George's assistant."

"Ah-h! Didn't you say Jerry went out yesterday afternoon? What kind of a scar has Jerry?" demanded Mr. Castleman before his nephew could reply to the first question.

"It's a callous place on his wrist. It was made when Jerry was a prisoner among the dervishes."

"Among the dervishes, eh?" said Mr. Castleman, thoughtfully. "I'll see this Jerry. Say nothing about the loss of the jewels. Go down and find the man. Tell him to bring me a lunch in the library. Not a word to any one, remember."

Ted obeyed, and in a few minutes followed the butler's assistant (who bore a tray) into the room. Jerry set the tray down upon the table and, laying a cloth before Mr. Castleman, deftly arranged the dishes. The footman was immaculately dressed in the accepted garb of a servant, but Mr. Castleman noticed that he wore a pair of old-fashioned blue-yarn "wristers," which showed a very little below his coat-sleeve.

"Why do you wear those things?" demanded the gentleman, pointing to the wristers.

"Them things? Why—Hi—Hi halways wears 'em," stammered Jerry.

"You do, eh?" Mr. Castleman suddenly seized the right hand of the footman and pushed back the bandage. There was a broad scar right across the wrist. "To hide that?" he demanded, looking the fellow straight in the eye.

"That scar, sir, Hi got in the Soudan campaign," said Jerry, recovering his dignity.

"That scar, my man, you got aboard a British prison-ship. I've seen the mark before. My friend, you're caught. No you don't, sir! You will remain just where you are. I have already rung for the police."

The rascally footman crouched in the corner.

"You got the jewels very neatly—with a specially made key to the safe, I'll be bound—but the boy was too observant for you, after all. Yes, Theodore, he is your benignant old gentleman—the returned missionary. I'm afraid he's more likely a returned ticket-of-leave man."

Which later, upon investigation by the police, proved to be true. Mr. Castleman recovered the jewels stolen by the rascally footman, but Master Ted hasn't recovered his overwhelming confidence in his own sharpness even yet.

Save Your Eyes

"If your eyesight is good take care of it. Look away off yonder every time you get to the bottom of a page in reading. If it is defective let no foolish pride prevent you from wearing the proper glasses. There is no sense in handicapping yourself in life when a piece of glass before each eye will make your vision as good as it possibly can be. The oculist will not advise you to wear glasses if you do not need them any more than he will prescribe a drug you do not need. Plenty of people, though, do not know that they have defective sight because they have never really seen at all. They have headaches, inflamed eyes, styes, even much graver troubles from the strain of trying to see with eyes that were put up wrong."
—Harvey Sutherland, in Ainslee's.

If You Are Sick

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I wish simply your name and address—no money. Say which book you want.

I will send with it an order on your druggist to let you have six bottles of Dr. Shoop's Restorative. He will let you take it for a month, and if it succeeds he will charge you $5.50 for it. If it fails he will send the bill to me. He will trust to your honesty, leaving the decision to you.

Such an offer as this could not be made on any other remedy. It would bankrupt the physician who tried it. But in five years I have supplied my Restorative on these terms to 550,000 people. My records show that thirty-nine out of each forty paid for it, because they were cured.

This remedy alone strengthens those inside nerves that operate all vital organs. It brings back the only power that can make each organ do its duty. No matter how difficult the case, it will permanently cure unless some organic trouble, like cancer, makes a cure impossible.

I have spent my lifetime in preparing this remedy. I offer now to pay for all you take if it fails. I cannot better show my faith in it. Won't you merely write a postal to learn if I can help you?

Simply state which book you want, and address Dr. Shoop, Box 910, Racine, Wis.

Book No. 1 on Dyspepsia
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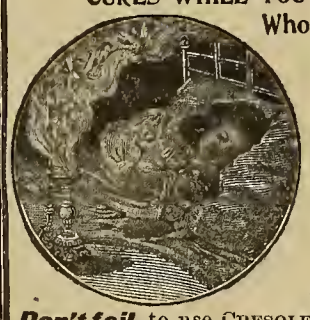

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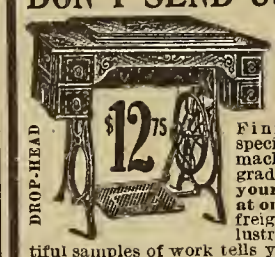

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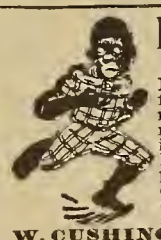

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If afflicted with weak eyes, use Thompson's Eye Water

FRIED ONIONS

Indirectly Caused the Death of the World's Greatest General

It is a matter of history that Napoleon was a gormand, an inordinate lover of the good things of the table, and history further records that his favorite dish was fried onions; his death from cancer of stomach it is claimed, also, was probably caused from his excessive indulgence of this fondness for the odorous vegetable.

The onion is undoubtedly a wholesome article of food, in fact has many medicinal qualities of value, but it would be difficult to find a more indigestible article than fried onions, and to many people they are simply poison, but the onion does not stand alone in this respect. Any article of food that is not thoroughly digested becomes a source of disease and discomfort whether it be fried onions or beefsteak.

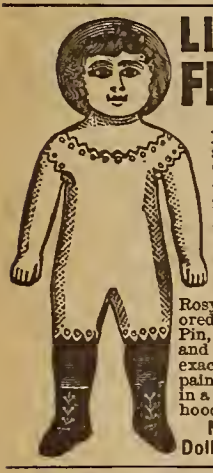
The reason why any wholesome food is not promptly digested is because the stomach lacks some important element of digestion—some stomachs lack peptone, others are deficient in gastric juice, still others lack hydrochloric acid.

The one thing necessary to do in any case of poor digestion is to supply those elements of digestion which the stomach lacks, and nothing does this so thoroughly and safely as Stuart's Dyspepsia Tablets.

Dr. Richardson, in writing a thesis on treatment of dyspepsia and indigestion, closes his remarks by saying, "For those suffering from acid dyspepsia, shown by sour, watery risings, or for flatulent dyspepsia, shown by gas on stomach, causing heart trouble and difficult breathing, as well as for all other forms of stomach trouble, the safest treatment is to take one or two of Stuart's Dyspepsia Tablets after each meal. I advise them because they contain no harmful drugs, but are composed of valuable digestives, which act promptly upon the food eaten. I never knew a case of indigestion or even chronic dyspepsia which Stuart's Tablets would not reach."

Cheap cathartic medicines claiming to cure dyspepsia and indigestion can have no effect whatever in actively digesting the food, and to call any cathartic medicine a cure for indigestion is a misnomer.

Every druggist in the United States and Canada sells Stuart's Dyspepsia Tablets, and they are not only the safest and most successful, but the most scientific of any treatment for indigestion and stomach troubles.

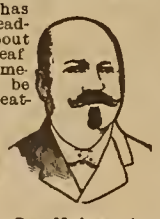


LIFE SIZE DOLL FREE "Baby's clothes will now fit Dollie."

Girls can get this beautiful Life Size Doll absolutely Free for selling only four boxes of our Great Cold & Headache Tablets at 25 cents a box. Write to-day and we will send you the tablets by mail postpaid; when sold send us the money ($1.00) and we will send you this Life Size Doll which is 2½ feet high and can wear baby's clothes. Dollie has an indestructible Head, Golden Hair, Rosy Cheeks, Brown Eyes, Kid Colored Body, a Gold Plated Beauty Pin, Red Stockings, Black Shoes, and will stand alone. This doll is an exact reproduction of the finest hand painted French Doll, and will live in a child's memory long after childhood days have passed. Address,
NATIONAL MEDICINE CO.,
Doll Dept. 16 C, New Haven, Conn

DEAFNESS AND HEAD-NOISES CURED AT HOME. SMALL EXPENSE.

Dr. W. O. Coffee, Des Moines, Iowa, has just published a book on "Deafness, Head-Noises, Causes and Cure." It tells all about the ears and how he cured himself of Deafness with his wonderful Absorption Remedies. Ninety per cent of deafness can be helped or cured by the Absorption treatment. Incurable cases not taken.



He sends his book free to all having deafness and ear trouble who write him. The book explains how you can cure your deafness and head-noises at home at small expense. Ask for Deafness Book and write today. Address
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How to reduce it

Mr. Hugo Horn, 344 E. 65th St., New York City, writes: "It reduced my weight 40 lbs. three years ago, and I have not gained an ounce since." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc.
Hall Chemical Co., Dept. B, St. Louis, Mo.

DIAMOND RING FREE.

Magnificent, flashing Akah diamond, mounted in the famous Tiffany style setting, finished in pure 18k. solid gold. Absolutely warranted for years. Send full name and address. We send postpaid 10 scarf pins to sell at 10c. each. When sold, return us the money and we send at once above beautiful ring carefully packed in elegant plush lined case. We send large premium list too.
BISMID JEWELRY CO.,
122 PARK ST., ATTLEBORO, MASS.

If afflicted with weak eyes, use Thompson's Eye Water

Old Roman Newspapers

A correspondent of the Chicago "Record-Herald," in a recent letter from Rome, says: "An interesting study has been published in one of the local reviews on journalism in ancient Rome. The periodical press dates from the times of Cicero and Julius Caesar, when news-sheets—'Acta diurna Urbis' (daily city events)—were posted every morning in the Forum, and copied and sold in the city and the provinces.

"They were dry chronicles of the events of the day—a paltry streamlet when compared with the mighty rivers of our days—containing no leading articles, no learned polemics, no foreign correspondence, but a summary of some important debate in the senate, reports of law-courts, descriptions of gladiatorial fights, accounts of portents, religious festivals and crimes.

"These 'Acta' were collected and placed in some office or public library, and must have formed an interesting series from the last days of the republic down to the reign of Constantine, when the seat of government and possibly the files of newspapers were removed to Constantinople.

"The collection is now lost, but fragments have been preserved in the works of Tacitus, Pliny, Suetonius and Dion—interesting fragments, mostly of trivialities, which have glided down to us through the cycle of centuries, throwing a glimmer as of rush-lights over the greatest empire of antiquity as it worked and lived.

"In a news-sheet of April 11, A. U. C. 748 (B. C. 5), it was recorded that C. Crispinus, a plebeian from Fiesole, came to Rome with seven sons, two daughters and thirty-five grandchildren to offer a sacrifice to the Capitoline Jove; and that when the corpse of Felix, the charioteer, was placed in the funeral-pile a devoted friend rushed on the burning pyre and was cremated with him.

"Other sheets announced that sentence had been passed by Titianus upon those butchers who notoriously sold meat not inspected by the authorities, and that the fines were immediately paid and would be devoted to the erection of a shrine; that an affray took place last night at 'The Bear,' a wine-shop near the temple Janus, and that the landlord was dangerously wounded; that a violent thunder-storm burst yesterday over the city, the lightning striking the old oak-tree in the Velia; that Denniphon, the robber, lately arrested by the legate Neava, was crucified early this morning.

"One of the newspapers of the reign of Nero told the story of a dog belonging to a slave executed by the emperor's orders. The dog stood by the corpse, and when food was given it pushed the food with its nose to the lips of the dead slave, and when the corpse was thrown into the Tiber the poor animal leaped into the river and tried to keep the body above water.

"Other 'Acta' described the funeral of Germanicus, and the indignant protests of the senator Thraseas when his cowardly colleagues applauded Nero's matricide. Those ancient journalists also tried their hands at 'canards.' Thus it was gravely announced that a phenix had been brought to Rome, and exhibited in the Comitia; and that during the trial of Milo for the murder of Clodius it rained baked bricks in several parts of the city.

"These startling items of news are clumsily conceived, and evidently lack the skill displayed in our later days in the same line. They are on a par with some of the portents of the Middle Ages, and show the gullibility of the Roman public in olden times."—W. Rapinet Mackenzie.

Russia Does the Largest Business in the World

"The Russian state is by far the greatest economic unit on the face of the globe." To ninety-nine readers out of a hundred this statement will doubtless be startling. It certainly was to me when I first met with it, yet the facts to justify it are not far to seek. The Russian state draws an annual net profit of forty-five million rubles from its forests, mines and agricultural property. It receives annually eighty million rubles from its communities of ex-serfs for the use of land it ceded to or purchased for them. It is building by far the longest and most costly railway in the world, and it owns and works over twenty thousand miles of railways, the net revenue on which is equal to one seventh of the net revenue of all the railways of the United States.

In 1898 it received one hundred and eighty million pounds into its coffers, nearly one half of which sum was not produced by taxation. Its budget is greater than that of France by more than two hundred million dollars.

In 1890, when one of the banks of London was unable to meet its obligations, the Russian government had with it on current account a balance of so many millions of pounds that when the Bank of England came to the rescue a request was immediately made to Russia not to dispose of her balance before a certain date, since to do so would be to precipitate a financial crisis of the utmost gravity. Finally, beside being a capitalist and a banker of this magnitude, the Russian state is also a metallurgist and a spirit-merchant. In a word, the proud claim is made for it that it is the greatest landowner, the greatest capitalist, the greatest constructor of railways, and carries on the largest business in the world.—Scribner's Magazine.

No stream from its source flows seaward, however lonely its course, but that some land is gladdened. No star ever rose and set without influence somewhere. No life can be pure in its purpose and strong in its strife and all life not be purer and stronger thereby.—Owen Meredith.

Wireless Telegraphy of Long Ago

Long before the dawn of the Christian era wireless methods of communicating intelligence to a distance were employed—not electric telegraphs, as the term is generally understood, it is true, but wireless they certainly were.

Polybius, the Greek historian, describes a telegraph system employed for military purposes, 300 B. C., in which torches were placed on high walls in prearranged positions to correspond to letters in the Greek alphabet. By a suitable manipulation of the torches messages were thus transmitted to a distance. The Gauls, too, were wont to transmit important intelligence to a distance by a cruder but simpler method. A messenger was sent to the top of a hill, where he shouted his message apparently to the winds. Soon from afar a remote voice answered him, and this voice repeated the message to another listener further on, and thus, from one to another, the message sped. It is recorded that in three days a message, calling all the tribes of the Gauls to arms, traveled in this way from Auvergne to the forests of Amorica in one direction, and to the banks of the Rhine in another.

Later on came another wireless-telegraph system—the semaphore telegraph—and this was in operation all over Europe prior to, and for some time after, the introduction of the electric telegraph. This semaphore telegraph employed arms on posts, akin to those seen to-day along every railway in the world, and a certain position of the arms, like the torches in the Polybius system, corresponded to certain letters of the alphabet. By varying the position of the arms as required experts were able to transmit messages from one station to the other at the rate of two or three words a minute. The towers, on the top of which the semaphores were erected, were often fifty to sixty feet high, and were placed on eminences about six or eight miles apart. In Russia alone there was a string of these towers from the Prussian frontier to St. Petersburg, a distance of one thousand two hundred miles or more.—Wm. Maver, Jr., in Cassier's Magazine.

A Point of Morals

"Long ago William Dean Howells protested against the immorality of the pseudo-historical novel. Yet this novel becomes more and more popular as book-seasons pass. It is read by the best people, by most of the people and largely by young people. School girls and boys who would faint at the sight of a bloody handkerchief revel in pages of gore. Respectable maiden ladies, who feel it a duty to interfere whenever they see two boys at fisticuffs in the street, stay awake into the small hours engrossed in the latest romantic novel—a story of adventure, for which read rapine; of gallant deeds, for which read murder and assault; and of young love, for which read lust. Every play made from a swash-buckler novel must have from three to a dozen sword-fights and one supreme scene in which the bad man attempts to assault the good girl. Now, these sword-fights are so pernicious an incentive to headiness and combat among the strong and valorous youth of our land that they should be discouraged emphatically. We have foot-ball and boxing-gloves to keep alive in our young men the spirit of manliness and the skill that is necessary to prove it. And certainly the clumsy, attempted-assault scenes of the swash-buckler drama are immoral. From the point of view of good taste they are unmentionable. But the worst sin of all these plays is their fat stupidity. All else may be condoned, but their stupidity is unpardonable. Actors are stupefied by playing in such plays, managers by reading them, critics by considering them, and the public by seeing them. The swash-buckler story and play is a disease, and it must go through its course. Ah, what a hereafter for the men that make them and get rich on them! Readers and audiences have it here. Theirs must be to come."—Richard Duffy, in Ainslee's.

Cocoanut-palms

The cocoanut-palm is one of the handsomest palms by its long, graceful leaves. It grows luxuriantly as far north as Palm Beach, Florida, and a few specimens may be seen a little above that point. Used to line walks, they present a picturesque scene, the low branches curving gracefully overhead. The nuts and their development are very interesting to observe. As a long time is occupied in the growth of the nuts, they may be seen on the same tree in many stages, from small, acorn-like ones to the immense, brown-husked fellows, all in large bunches. The flowers, too, for a new crop may be included in the collection.

It is a matter for concern that there appears to be little or no attempt to propagate cocoanuts in Florida, even though they be for ornamental purposes only. They are far from being so plentiful as they were fifteen years ago.—Meehans' Monthly.

The Secret

Softly the little wind goes by,
A whisper—nothing more;
Some message from the azure sky
Brought down to earth's green door.

Fragrant and fresh the wonder-word,
But what it means, who knows?
Only the butterfly, the bird,
The leaf, the grass and rose.

Theirs the divine felicity,
The gift of wisdom rare,
The melody, the mystery,
The secret of the air.

—Frank Dempster Sherman, in Frank Leslie's.

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THE MODERN STOVE POLISH

Brilliant. Clean. Easily Applied. Absolutely Odorless

LIQUID—BETTER YET! FIRE PROOF!!

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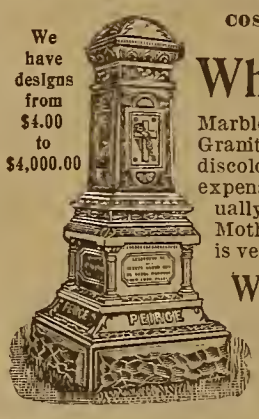

Marble is entirely out of date. Granite soon gets moss-grown, discolored, requires constant expense and care, and eventually crumbles back to Mother Earth. Besides, it is very expensive.

WHITE BRONZE is strictly everlasting. It cannot crumble with the action of frost. Moss-growth is an impossibility. It is more artistic than any stone. Then why not investigate it? It has been adopted for nearly one hundred public monuments. Write at once for free designs and information. It puts you under no obligations. We deal direct and deliver everywhere.

The Monumental Bronze Co., 347 Howard Avenue Bridgeport, Conn.

CONSTIPATION INDIGESTION TORPID LIVER

These are the great curses which afflict three-quarters of the present generation. Sufferers from either one or all of them must always feel miserable, and sooner or later become chronic invalids, useless to themselves and a burden and nuisance to friends and family. There is one sure, safe and absolute cure which you can test without any expense. Our remedy is Egyptian Regulator Tea, a trial package of which we will send you *free and prepaid* on request. Unless you find our claims are true, we must be the losers by this liberal act. Shall we send you the trial package, and lead you to perfect health and happiness? Address,
THE EGYPTIAN DRUG CO., New York.

Rupture Cured

This is the only Elastic Truss made under Patents and Trade-mark issued by United States government.

Two New Patents Just Issued

This truss is worn night and day with comfort, and is warranted to hold the worst case of Rupture steadily during the most laborious exercise. The front piece fitted with new patented

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controlling pressure of pad. Pad can be made harder or softer by turning a single screw. Perfect adjustability. Perfect comfort. Radical cure. *Send for full description and instructions for self-measurement.*
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TWO RINGS FREE

Send name and address no money, and we will mail you 12 boxes of Comfort Cough Tablets. Will cure a cough in one day. Sell them for 10 cents a box. Send us the $1.20 and we will mail you these two beautiful SOLID GOLD laid Rings. Will wear a lifetime. No money required till tablets are sold. We take back all not sold.
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BROWN'S BRONCHIAL TROCHES

Neglect of a Cough or Sore Throat may result in an Incurable Throat Trouble or Consumption. For relief use BROWN'S BRONCHIAL TROCHES. Nothing excels this simple remedy. Sold only in boxes.

1427 Silk Fringe Cards, Love, Transparent, Escort & Acquaintance Cards, New Puzzles, New Games, Premium Articles, &c. Finest Sample Book of Visiting & Hidden Name Cards, Biggest Catalogue. Send 2c. stamp for all. OHIO CARD CO., CADIZ, OHIO. CARDS

WRITE THE LADY DOCTORS STATE YOUR TROUBLE AND BE CURED AT HOME
OUR REMEDY GIVES RELIEF IN 24 HOURS. Address
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FRUIT TREE AGENTS We'll send you free, plans by which you can make large additional profits without conflicting with your present lines. Write quick. Frank H. Battles, Seed Grower, Rochester, N. Y.

WANTED AGENTS in every county to sell "Family Memorials." Good profits and steady work. Address CAMPBELL & CO., 16 Plum St., Elgin, Ill.

Playing Checkers at the Store

In a dim nook, partly sheltered
By the barrels therein stored,
With a rapt, intent expression,
Sit two players at the board.
And the country merchant lingers,
Loath to serve the public more,
For his thoughts are with the worthies
Playing checkers at the store.

Pondering the situation
On the mimic battle-field,
Guarding carefully the "king-row"
Lest the small battalion yield,
"Jumping" with a gleeful chuckle,
"Crowning" his opponent's "king,"
With a slow and shrewd decision
All his plots manoeuvering.

E'en the supper-hour approaching,
With its promise of good cheer,
Has no magic in its summons
To entice the players here.
Yet the contest in its finish,
With its fine unwritten law,
May with all its complications
Be decided by a "draw."

They may boast of golf and tennis,
And the tournaments of chess,
Heralded by great announcements
And the plaudits of the press,
But those champions of pleasure,
With their fund of players' lore,
Well might envy these old worthies
Playing checkers at the store.

—Anna Fuller Treat, in Modern Culture.

Training Dogs for Policemen

The dogs are taught by means of dummy figures made up as much as possible to represent the thieves and dangerous characters they may be likely to meet. How much patience is needed by him who undertakes this particular form of education only those who have tried to train animals will properly appreciate. The dog must be taught to seek, to attack, to seize and to hold, but without hurting seriously. The first step is to place the dummy in such a position that it shall represent a man endeavoring to conceal himself. The dog soon understands that it is an enemy whom he must hunt, and enters heartily into this part of his lesson, but it is not so easy to teach him not to injure it. The teacher lowers the figure to the ground, and the dog learns that, though he may not worry his prey, he must not allow his fallen foe to stir so much as a finger until the order is given. After the dummy a living model is used, and as this process is obviously not entirely without danger the person chosen for this purpose is usually he who ministers to the pupil's creature comforts and for whom the canine detective is sure to entertain a grateful affection. Nevertheless he is prevented at first, by means of a muzzle, from an exhibition of too much zeal. Afterward the experiment is tried on other members of the force. In four months the dog's education as a policeman is considered complete and he takes his place with the rest. The animals are also taught to swim and to seize their prey in the water; to save life from drowning; to scale steel walls, and to overcome all obstacles, so that any enterprising burglar who goes "a-burgling" in Ghent has a lively time of it if he meets with one of these four-footed "bobbies."

The dogs work so well and so conscientiously that their number is to be increased, and there is every probability that the plan will be adopted in other centers. Their keep comes to about three pence a day, and they cost the town altogether about sixty pounds a year, including their doctors' and their tailors' bills.—J. E. Whitby, in Modern Culture.

Development of Seeds of Plants and Fish Eggs

It is quite an interesting fact that the plan of development of plants and fish from the egg is practically identical. This is most noticeable where the former have large, "meaty" cotyledons, or seed-leaves. The pea affords a good example with which to illustrate this curious phase of vegetable and animal life. Before planting the pea-seed is comparatively small and wrinkled, but soon after being placed in the ground it becomes appreciably larger by the absorption of moisture. So in like manner the eggs of fishes swell in size after having been "laid," also by the absorption of water. When the pea-seed has sprouted the little plant for some days draws its sustenance not from the earth, but from the contents of the cotyledons, or seed-leaves. When the supply is exhausted the rootlets begin to exercise their functions, and food is taken from the soil. When, after the proper period has arrived, the little fish struggles, tail foremost, from the egg it is found that a sac is attached to its stomach. The little creature feeds on the contents of this sac in the same manner as the wee plant does on that of the cotyledons, until they are all absorbed. Then the young fish receives its supply of food in the ordinary manner. It is also a curious fact that the fertilization of the fish egg is performed almost in the same manner as is the same function in plant life—namely, externally.—W. E. Meehan, in Meehan's Monthly.

Elongation of Tree-trunks

It is a rather common error among people not very familiar with plants that the trunks or stems of all plants elongate, and that the branches starting from the main stem of a tree, say five feet from the ground, will a year or two later be six or seven feet above the ground. This is not so. The first year, while the main stem or axis is growing, a small young branch may be carried with the growth, but usually only in the shape of a bud even then. After that the position of the branch is fixed.—Meehan's Monthly.

The Andean Railway

"A second conquest—a conquest by steel—of ancient Peru has begun, but it is the steel of rails and cars, not of swords," says Mr. C. Lockhart, in the October "World's Work," by way of introduction to his article on the building of a railroad from Guayaquil to Quito, "a railroad that by the energy of an American engineer is now climbing through the defiles of the Andes, from the alluvial fertility of the coast up into the wealth of the high plateau beyond the Cordilleras. Steel rails will pry open the doors of a land of gold and grain, and bring prosperity to a drowsy people. The opening of Ecuador by a railroad is an event of importance in the extension of civilization."

Mr. Archer Harman, a Virginian, was the engineer selected by President Alfaro to perform this task. In person Mr. Harman led his engineers into wild places to blaze the way for the railroad. "For months he cheerfully endured hardships and danger. The first of the grading slid down the mountains when there was a rainfall of ten inches in twenty-four hours. Then Mr. Harman found a new way—this time through the Chan-Chan Valley—through a pass nearly twelve thousand feet high. It is along this line that rails are now being spiked." Mr. Harman has also financed the road, incidentally refunding the national debt of Ecuador, and fighting revolutionists betweentimes.

"The railway has already been equipped and opened for traffic for a distance of sixty-seven miles, and a further forty-eight miles to Palmira Pass is soon to be opened. From Palmira Pass to Quito there are practically no engineering difficulties. The entire line to Quito will be finished before the first of July, 1902.

"The coast district already tapped by the road now furnishes forty per cent of the chocolate of the world, this alluvial plain being famous for its cocoa plantations. Sugar, coffee, tobacco and fruits, growing there in profusion, are waiting to be increased by scientific cultivation. As yet it has been the Germans who have appreciated the possibilities of these plantations. On the high plateau about Quito one of the most fertile grain countries of the world covers a district somewhat larger than the state of New York. Here, too, are flocks noted for the fine quality of their wool, and herds whose hides bring high prices, since the altitude is peculiarly fitted for curing leather. It has long been vaguely known that Ecuador is one of the richest and most varied mineral fields in the world. In the south, partially opened by the road, five veins of coal in seams of six to thirty feet wide have been uncovered. South America now imports coal at a great expense. In the northern districts the eruptive nature of the country has deposited enormous quantities of sulphur, ninety-eight per cent pure, as well as large stores of pure alum. In the east of Ecuador immense tracts of rubber forests exist untouched at present, save for what the Indians bring out on their heads. Here, too, are large areas of valuable hard woods. The town of Ambato has a record of only five degrees changes in temperature during an entire year. Strawberries and peaches can be had every month. All this wealth is now seen vaguely as the railroad from Guayaquil to Quito opens wider the doors of the Andes."—Condensed from World's Work by Public Opinion.

How Germany Conquered France

You know how Germany conquered France? I'll tell you. It was long before the war was begun that she won it. A young man named Wolff was a lieutenant of engineers under Von Moltke. One day he was ordered to report in civilian's dress at the railroad-station. He went, reported, and was given a bag of samples. With his commanding officer he went from city to city as a commercial traveler, selling by samples. They went from merchant to merchant. At one place they visited several houses. Then the commander said, "We will take a walk and go across the bridge. We will not return together. On your way back you will pace the bridge, and going and coming keep your eyes open to observe all points of the bridge." The officer did as he was bidden, returned to his hotel, and wrote out a full description of the bridge, and sent it in, and thought no more of it. War came, and the whole German army marched to the frontier. As the advance drew near, this same bridge was blown up and fell in a mass of ruins. The army halted. A train of freight-cars came forward, and from these cars was taken the prepared material from which a new bridge was put together in a few hours. Every timber and every metal was ready for immediate use. A new bridge had been constructed for that particular crossing, based upon the officer's report.—Midland Christian Advocate.

Life

Life is a tinseled show, this earth the ring,
Our vast uplifted tent the azure sky;
Time, the ring-master, marks us with his eye,
Unfurls his lash, and lets us feel its sting.
Wealth is the carpet the attendants bring
To ease our bones; we leap, and hear the cry
Of quick approval; then with courage high
We dance a measure, draw the bow, or sing.
We mount our hobbies, and we have our falls,
We pierce the papered hoops of pleasure through;
The light and music of the scene enthralls,
We love our filmsy skirts of pink and blue.
Yet when the monitor insistent calls
We make our exit through the canvas walls.

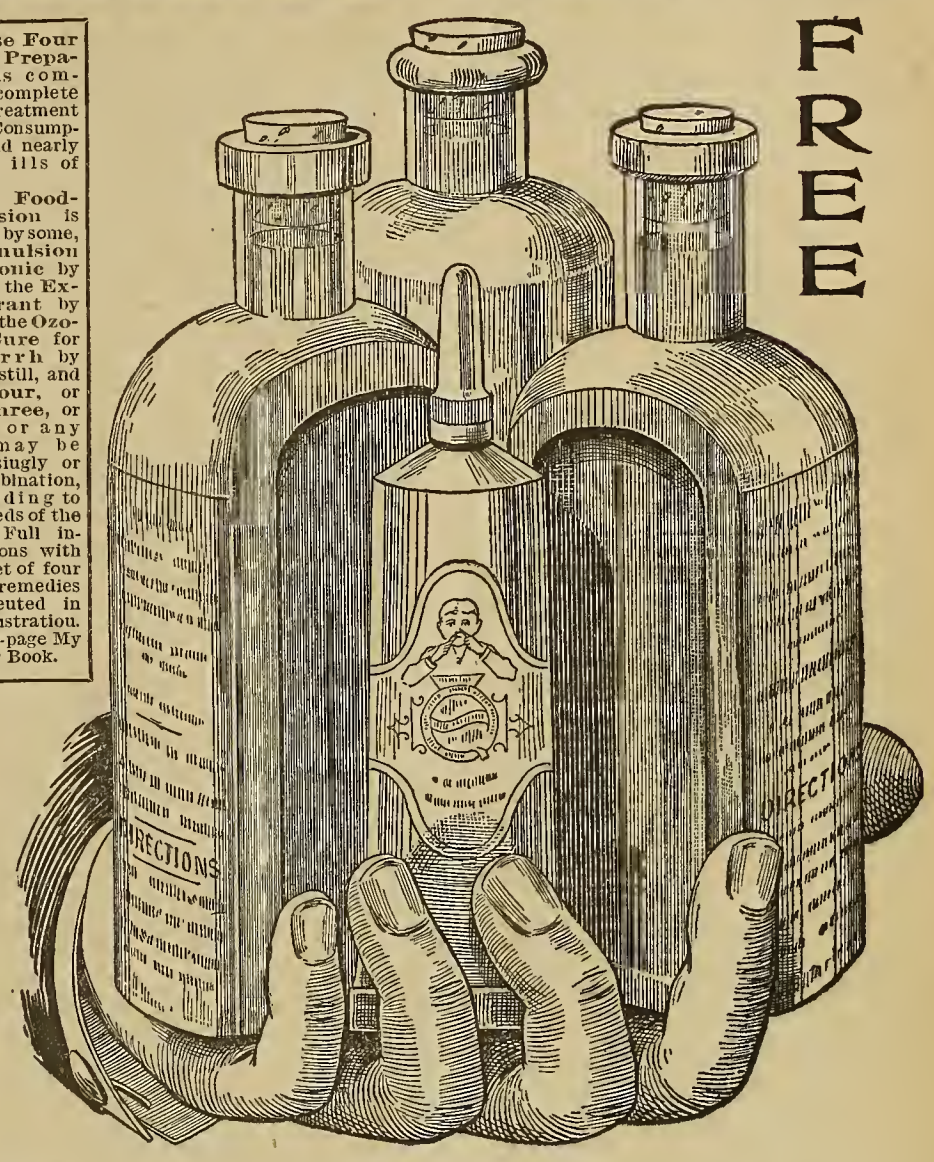
—Isabel Ritchie.

Thoughts

Grim wrestlers on the field of fate,
They strive together, round on round;
What men call deeds of love and hate
Are but their shadows on the ground.

—Winifred Webb, in McClure's Magazine.

HERE IS HEALTH FREE



These Four New Preparations comprise a complete new treatment for Consumption and nearly all the ills of life.

The Food-Emulsion is needed by some, the Emulsion and Tonic by others, the Expectorant by others, the Ozojell Cure for Catarrh by others still, and all four, or any three, or two, or any one may be used singly or in combination, according to the needs of the case. Full instructions with each set of four free remedies represented in this illustration. Also 68-page My Doctor Book.

SPECIAL NOTE.—The Slocum System of Treatment for the cure of CATARRH, BRONCHITIS, LUNG TROUBLES and CONSUMPTION is medicine reduced to an exact science by America's foremost specialist, and our readers are urged to take advantage of Dr. Slocum's generous offer.

These four remedies represent a **New** system of treatment for the **Weak** and those suffering from **Consumption, wasting diseases,** or inflammatory conditions of **Nose, Throat** and **Lungs.**

The treatment is **Free.**

By the new system devised by DR. SLOCUM, the great specialist in pulmonary and kindred diseases, all the requirements of the sick body are supplied by the **FOUR** remedies constituting his Special Treatment known as **The Slocum System.**

Whatever your disease, **one** or **more** of these four preparations will be of wonderful benefit to you.

According to the needs of your case, fully explained in the Treatise given free with the free remedies, you may take **one,** or any **two,** or **three,** or **all four,** in combination.

A cure is **certain.**

The remedies are especially adapted for those who suffer from weak lungs, coughs, sore throat, **Catarrh, Consumption** and other pulmonary troubles.

But they are also of wonderful efficacy to the building up of **weak systems,** in purifying the blood, **making flesh** and restoring to weak, sallow people rich and healthy constitutions.

The many ailments of women and delicate children are speedily relieved.

The basis of the entire system is a flesh-building, nerve and tissue renewing food.

Every invalid and sick person needs **strength.** This food gives it.

Many people get the complete system for the sake of the perfected **Emulsion of Cod-Liver Oil,** which they themselves need, and give away the other three preparations to their friends.

The second article is a **Tonic.** It is good for weak, thin, dyspeptic, nervous people. For those who have no appetite, who need bracing up.

Thousands take only the Emulsion and the Tonic.

The third preparation is a medicinal healing **Ozojell,** in a patent Ozojell nasal tube. It cures catarrh. It heals all irritation of the nose, throat and mucous membranes. It gives immediate relief. It is also a splendid application for sore lips and rough skin.

Perhaps many readers of the FARM AND FIRESIDE need the Ozojell cure for catarrh.

The fourth article is an **Expectorant** and Cough and Cold cure. The only expectorant that can positively be relied upon. Is absolutely safe for children. Goes to the very root of the trouble, and not merely alleviates, but **cures.**

The four remedies form a panoply of **strength** against disease in whatever shape it may attack you.

THE FREE TRIAL

To obtain these four **Free** preparations, illustrated above, all you have to do is to write to

DR. T. A. SLOCUM, 98 Pine St., New York

giving full address. The four **Free** remedies will then be sent you, direct from the laboratories, in the hope that if they do you good you will recommend them to your friends. When writing the Doctor please tell him you read this in the FARM AND FIRESIDE, and greatly oblige.

Low Settlers' Rates

to the Northwest Every Day During March and April, 1902.

Free land; low priced land; fine climate; splendid crops; good schools and churches; good neighbors. The growth and prosperity of the wonderful Northwest is unequalled in the history of America.

Now is your opportunity to secure a home and farm. Don't neglect it. Write to-day. The good land is going fast. It will soon be gone.

These Bulletins tell you all about it. Send 2c stamp for each one wanted.

North Dakota Bulletin
Milk River Valley (Mont.) Bulletin
Flathead County " "
Cascade County " "
Colville Res. (Wash.) Bulletin
Stevens County " "
Central Wash. " "
Wenatchee Valley "
Map and description of Washington (Folder.)

Write for rates and full information to any agent of

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NEW YORK, 413 Broadway.
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MILWAUKEE, 66 Wisconsin St.
CINCINNATI, 5th and Walnut Sts.
ST. LOUIS, 403 Carleton Building.
KANSAS CITY, 322 Walnut St.
DES MOINES, 407 Walnut St.
ST. PAUL, 332 Robert St.
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F. I. WHITNEY, Gen. Pass. & Ticket Ag't, St. Paul, Minn.
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There are two sorts of lamp chimneys: mine and the rest of them.

MACBETH.

My name on every one.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.
MACBETH, Pittsburgh.

REGISTERED IN U. S. PATENT OFFICE SEPT. 24, 1901.

Any one can earn Dolls, Bracelets, Rings and other Valuable Premiums. This is a beautiful Imported dressed Doll nearly two feet tall, a perfect beauty imported direct from Europe. This lovely doll has a beautiful turning bisque head, pearly teeth, long golden hair, natural sleeping eyes, jointed body, real slippers, stockings, etc., by introducing our latest Parisian Novelties, ladies' and misses' belt pins, hair barrettes, beauty pins, etc., at ten cents per card. **Our Grand 30 day Proposition** which is apart from above, send us your full name & address & we will send you 15 cards of our latest Parisian Novelties postpaid. You sell at ten cents per card and return us $1.50, we will send you (all charges prepaid) a beautiful Imported French Doll also a gold finished ring.
FRENCH NOVELTY CO., Dept. N23, Bridgeport, Conn.

Catarrh and Consumption

I have spent nearly 50 years in the treatment of the above named troubles and believe I have effected more permanent cures than any specialist in the history of medicine. As I must soon retire from active life, I will, from this time on, send the means of treatment and cure as used in my practice, **Free** and post-paid to every reader of this paper who suffers from these loathsome, dangerous and disgusting diseases. My treatment will positively give prompt relief and cure in the worst cases. This is a sincere offer which anyone is free to accept. Addresss, PROFESSOR **J. A. Lawrence, 114 West 32d St., New York.**

HOW A WOMAN PAID HER DEBTS

I am out of debt, thanks to the Dish-Washer business. In the past three months I have made $600.00 selling Dish-Washers. I never saw anything sell so easily. Every family needs a Dish-Washer, and will buy one when shown how beautifully it will wash and dry the family dishes in two minutes. I sell from my own house. Each Dish-Washer sold brings me many orders. The dishes are washed without wetting the hands. That is why ladies want the Dish-Washer. I give my experience for the benefit of any one who may wish to make money easy. I buy my Dish-Washers from the Mound City Dish-Washer Co., St. Louis, Mo. Write them for particulars. They will start you in business in your own home. L. A. C.

TRIAL BOX FREE which will give any lady a beautiful complexion. It is not a face powder, cream, cosmetic or bleach, but is absolutely pure and you can use it privately at home. It permanently removes moth patches, redness, crow's feet, pimples, blackheads, fleshworms, sallowness, freckles, tan, sunburn, and all complexion disfigurements. Address, Madame M. Ribault 3888 Elsa Building, Cincinnati, Ohio.

Mme. Benoit's Russian Depilatory
INSTANTANEOUSLY REMOVES
SUPERFLUOUS HAIR
without torturing, blistering, discoloring, or leaving any blotch, signs, or other ill effect on the skin. An effective, instantaneous, harmless remedy.
Send for Booklet Giving Full Information
MME. BENOIT, 2 East 42d St., New York City
Kindly mention this paper.

YOU DYE IN 30 MINUTES Soiled and faded clothing of all kinds made to look like new with the celebrated **TONK'S FRENCH DYES** So simple a child can use them, being twice the strength of other dyes, carpets and rugs retain their brilliancy for years, as the colors are permanent and **Will not Freeze, Boil or Wash Out** To introduce them give your dealer's name and we will send you 6 large packages for 40c, or 1 for 10c, any color. Say whether for wool or cotton. Write quick, catalogue and color card free. Agents wanted.
FRENCH DYE CO., Box 413, Vassar, Mich.

HIMSELF CURED Mr. A. S. HITCHCOCK
East Hampton, Conn. (The clothier) says if any sufferer from **Kidney or Bladder Diseases** will write him he will inform them of the perfect home cure that did the work in his case.

CANCER CURED WITH SOOTHING, BALMY OILS.
Cancer, Tumor, Catarrh, Piles, Fistula, Ulcers and all Skin and Female Diseases. Write for Illustrated Book. Sent free. **DR. W. O. BYE, Kansas City, Mo.**

IF SICK *Our New Electric Method* WILL CURE YOU AT HOME. Book free. U.S. Electric Co., 338 Dearborn St., Chicago, Ill.

TAPE-WORM EXPELLED WITH HEAD. GUARANTEED. BOOKLET FREE. BYRON FIELD & CO. DEPT. C.B. 132 STATE ST., CHICAGO.

Spending a Million

'F I had a million dollars,
All in a chunk, you know,
I'd stick right to the fellers
A thousand plunks er so.
An' then give paw a thousand,
So's he won't have to work,
An' buy a candy-store an' let
You kids go in aud clerk.

'F I had a million dollars
You fellers wouldn't see
Me chasin' with the rich hugs
Er in socie-tee.
That's where a feller's foolish,
'Au' 'tain't no way to he—
I'd give you kids this minute
That's allus stuck to me.

'F I bad a million dollars
We'd start right where we are
An' take a trip to Yurrup,
All in a private car,
An' ride past "Sissy" Jones's,
An' wouldn't he he sore!
Hey, Jimmy! that ain't his'n—
You promised me the core!

—Indianapolis Sun.

Don't Try to Show Children Off

A THOROUGHLY congenial party was taking luncheon one afternoon recently in a fashionable down-town cafe. Those at the table were old friends, but several of them had uot met before for years. Therefore the three-year-old hopeful of Mr. Mac and Mrs. Mac was not only a new acquaintance of the others, but was an object of uuusual interest by reason of the manner in which the father boasted of the little chap's intellectual attainments.

While awaiting the appearance of the ice-cream Mr. Mac grasped the opportunity to dazzle his friends with the brightness of the boy.

"Now, sou," he said, "won't you spell 'Jim' for the ladies and gentlemen?"

"J-i-m," responded Jimmy Mac, in faint, hesitant voice.

"That's a good little man," proudly said the father. "And now spell 'cat.'"

"C—," said Jimmy, and after considerable thought and some doubt, "a—"

"Correct," announced Mr. Mac. "Now go on."

But Jimmy apparently had struck a snag, and the proud parent was compelled to volunteer assistance.

"Dou't you remember the last letter?" he inquired. "What is it we drink at home iu the evenings?"

"Whisky," promptly declared Jimmy.

The bright boy was excused from further questioning.—Washington Star.

Ingersoll's Best Story

Ingersoll never tired of telling this story, published in Eli Perkins' "Wit and Humor of the Age," issued twenty-five years ago.

Two Irishmen, convicted of murder, stood tremblingly before the judge to receive sentence.

"Did you murder this man?" asked the judge.

"We did, sor. We would not tell a lie."

"How did you do it?"

"I sthruck him wid a stoue, and Moike he hit him wid a shillelah, and then we both av us buried him in the bog, sor."

"Well, well," said the judge, "but what did you do before you threw the body into the bog?"

"Sure we searched him, sor."

"Yes, and what did you find?"

"Two shillin's and two sixpence, yer Honor."

"Well, anything else?"

"Yes, sor; a foine lunch of bread and mate."

"Yes; aud what did you do with that?"

"We were hungry, sor, and we ate the bread, but threw the mate away?"

"Why did you throw the meat away?"

"Sure, sor, it was Friday."

Knew the Demon

The Prohibitiouist had assailed the Demon Rum mercilessly, and with every fresh onslaught the man with the red nose had applauded.

"Friend," said the lecturer at last, "you look like one who has been a drinking-man."

"You bet I have been, stranger," replied the man, earnestly; "but it does my heart good to see you git out after rum. I never did have no use for it. 'Tain't a fit drink for any man. You can't hammer it too hard for me, an' when you're through I've got a bit of old rye here that'll warm your heart up good. I like a man that knows what to hit and what not to hit."—Chicago Post.

Not That Kind

"No," said the landlady, "we cannot accommodate you. We only take in single gentlemen."

"Goodness," replied Mr. Marryatt, "what makes you think I'm twins?"—Philadelphia Record.

The Right Word

She—"The Brownes called on us last week, you know."

He—"Yes."

She—"Don't you think it is about time we should retaliate?"—Indianapolis Press.

Necessary Caution

"No, grandfather, we must not cross the highway just yet."

"And why not, child?"

"Because, grandfather, the safety-gates have been raised at the turn half a mile away, and the red ball is up on the signal-station on the hill."

"Yes, I see. What does it mean?"

"It means that an automobile is coming."

"But can't we get across before it gets here?"

"Not on your life, grandfather. The last man who tried it was thrown clear across yonder meadow and into a greenhouse. Look! There it goes!"

"I saw nothing but a whirl of yellow dust."

"That was it. Come now. No, we must wait again. The yellow flag is up in the other direction. That means a race. There they go! See them?"

"I saw nothing but more dust."

"They were too quick for you. That was a bunch of millionaires. They get dreadfully reckless. Only yesterday we picked up what was left of one of them in our front yard, and there wasn't enough of him to fill a peck measure."

"Can't we cross now?"

"Dear, no! All the yellow flags are up and all the red balls are up, and all the signal-men are signaling. They are coming from both ways. If we have real good luck we may see a collision. We get a commission at our house every time we report a collision to the coroner."

"But how will we get across?"

"I guess we will have to walk up to the covered bridge at the corner of the next block."—Cleveland Plain Dealer.

The Crow

A metaphor on the crow, from Henry Ward Beecher:

"Aside from this special question, profit and loss, we have a warm side toward the crow—he is so much like one of ourselves. He is lazy, and that is human; he is cunning, and that is human. He thinks his own color the best, and he loves to hear his own voice, which are eminent traits of humanity. He will never work when he can get another to work for him—a genuine human trait.

"He eats whatever he can get his claws upon, and is less mischievous with a belly full than when hungry, and that is like man.

"Take off their wings and put them in breeches, and crows would make fair average men. Give men wings and reduce their smartness a little and many of them would be good enough to be crows."

Confidence

First yellow journal editor—"Do you think this crusade against us is going to affect our circulation?"

Second yellow journal editor—"No; I've got too much faith in the bad taste of the people."—Life.

So Affecting

"Did you hear about the poetical way in which the Bifflets announced the death of their pet dog?"

"No. How was it?"

"They said, 'We regret to announce that our little Pearlie has steered his bark for the other shore.'"—Cleveland Plain Dealer.

A Curio Enthusiast

"Fosdick is an enthusiastic collector of curiosities," said Perkasie.

"I know," replied Bunting. "A man told him he had the original telegram that Caesar sent to Rome, 'Veni, vidi, vici,' and Fosdick never rested until he had bought it from him."—Detroit Free Press.

Waste Not

Frederic Villiers, the well-known war artist and correspondent, declares he saw the following sign in a prominent hotel in an Australian town where water was scarce:

"Please don't use soap when washing, as the water is required for tea."—Argonaut.

No Doubt

Mistress—"Did you tell the lady I was out?"

Servant-girl—"Yes, ma'am."

Mistress—"Did she seem to have any doubts about it?"

Servant-girl—"No, ma'am; she said she knew you wasn't."—New York Herald.

His Offense

The missionary—"My friend, I am afraid that you do not realize the dreadfulness of the drink evil."

The farmer—"Why, ma'am, I never tech a drop."

The missionary—"But you raise hops."—Judge.

His Retort

Waiter (suavely)—"Yes'r, that's the exact amount of your bill; but—er-h'm!—you have forgotten the waiter, sir."

Guest (savagely)—"We ll, I didn't eat the waiter, did I!"—Puck.

Cured Of Piles

Mrs. Hinkley, Indianapolis, writes: "The doctors said it must be an operation costing $800 and little chance to survive. I chose Pyramid Pile Cure, and one 50-cent box made me sound and well." All druggists sell it. It never fails to cure any form of Piles; try it. Book on piles, cause and cure, free by mail. Pyramid Drug Co., Marshall, Mich.

A Cure for
Rheumatism
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FARM SELECTIONS

A Grist of Grain and Clover Questions

"WHICH is the better pasture to sow in the spring for hogs, rape or soy-beans?"

They do not go in the same class. Rape is a pasture or soiling plant. Soy-beans should ripen, and the beans fed after they have been threshed. The soy-bean straw has a good deal of feeding value to sheep, cows or horses. Rape affords a large amount of succulent food for growing pigs. Soy-beans afford muscle-making elements of food for the growing pigs, and balance the ration in which corn is too exclusive a part.

"Are cow-peas hardy enough for northern New York?"

Certain varieties are. At an institute at Central Square, north of Syracuse, a gentleman said that the seed ripened on his farm. The cow-pea in the North should be a forerunner of clover; should be used to prepare the way for clover if the land is too deficient in humus to grow clover. True, it is a valuable feed, and should be utilized, but it need never be expected to supplant clover in any region that lies north of the Mason and Dixon line.

"Can we increase the protein content of our feed for winter dairying most profitably by growing protein or buying it?"

By growing it. Oil-meal is worth in New York thirty-two dollars a ton. Wheat bran is worth about thirty dollars. Soy-beans are worth almost as much a ton as oil-meal, and will yield, say twenty bushels an acre, or one thousand two hundred pounds, worth with the straw twenty-five dollars an acre. The expense of growing it is not half that. Then there are the Canadian field-pea, the cow-pea and clover and alfalfa plants to furnish protein cheaply. New York farmers are making only a living for their cows this year. The farmers of New York buy two million tons of grain every year, mostly to feed to cows. They can get out of this bondage to some extent if they will grow more of their own protein.

"My soil will grow big clover, but no alfalfa. What shall I do?"

Grow clover. If you are determined to grow alfalfa, lime your soil. Alfalfa must have lime. It must have a drained soil, too. It is doubtless more profitable to grow alfalfa, and you can do it if you will lime the land, drain it, clip the young plants off close twice the first season, and keep stock off it the first year.

"If the same amount of money were invested in clover-seed that is now invested in commercial fertilizers, would not the farmers be better off?"

Yes. There is no doubt that clovers are at the bottom of all stock husbandry, and successful farming as well. The clovers are the one class of crops that leave the soils richer than they find them. I class roughly the cow-peas and soy-beans with clovers. They are all legumes. Yet it may be that your land cannot be enriched by clovers, because they may not find in it sufficient fertility to make a start. You feed your hired man before you send him out to work. You feed your team before it goes to plow. You should feed your soil, if it is hungry, before you put clovers to gathering soil-fertility for you. That means that you may well afford, if you need it, to buy some phosphoric acid, and possibly some potash, to put in that soil to make the clovers start off on a gallop. It may even be that some nitrogen will be a help to start clovers, though as a rule acid rock or bone will do the good work. Many soils have sufficient potash. I know of a farm that is on thin, wet clay. The owner tried for years to bring it up with the use of clover. It came up very slowly, if at all. He drained it. He began the use of phosphates on his wheat, and then his clover doubled in vigor. Now he has as good corn as many of his neighbors, who had naturally soils of double the fertility of his.

"How does beardless spring barley compare with oats as a crop?"

With us it has been more profitable. It stands the effect of stable manure better, is much less apt to lodge, is a stiff straw, is a short straw, and does not smother out the young clover or alfalfa beneath it. It seems the ideal crop for a nurse-crop. Nurse-crops are often very selfish, and rob the infants of food and moisture instead of nursing them to life. We find it to yield from twenty-five to fifty bushels an acre. It will not pay to sow it on thin soils, as it grows too short.—Joseph E. Wing, in Breeders' Gazette.

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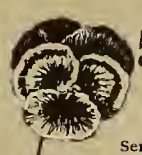

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FARM SELECTIONS

Formalin—Formaldehyde

THESE are two more hard words of which farmers will have to learn the meaning. We cannot help it. Farmers will have to get the meaning of a whole lot of words fully fixed in their minds if they are to keep up with the times.

What is formaldehyde? It is not necessary for us to go into the chemistry of it further than to say that it is a colorless, volatile liquid about half way between wood-alcohol, or the alcohol distilled from wood, and formic acid. Formic acid is the kind of acid that occurs naturally in ants, and occurs also in nettles, and is that which makes you jump when you touch them. Formalin is a forty-per-cent solution of formaldehyde. When you ask for formalin you simply ask for formaldehyde forty-per-cent strong.

Why must the farmer know something about formalin? Because it will pay him. How? Well, one way is in getting rid of oat-smut. We talked about that only a week or two ago, and we intend to repeat now what we suggested then, and add a little more to it, for we are determined that so far as "Wallaces' Farmer" folks are concerned they must not grow smutty oats, at least if we can help it.

We do not know how much they all lose every year by sowing smutty oats for seed; seldom less than five per cent, often twenty-five per cent. We will put this in a way that the farmer cannot help but see that it will pay him to get acquainted with formalin and use it. Professor Goff puts it in a better way than we have been able to do yet when he says:

"Suppose a farmer raises twenty-five acres of oats, and receives a yield, without treating the seed, of forty bushels an acre, or one thousand bushels. Now, if five per cent of the heads in this crop were destroyed by smut his crop would have been one thousand and fifty-two bushels of oats net gain, less the cost of threshing, if he had treated the seed. We will put the satisfaction of having good, clean oats with no smut in against the few cents that it would cost to thresh them and see how the account stands if oats are worth twenty-five cents a bushel. It would cost him about sixty cents for a pound of formalin, and perhaps four hours' work at fifteen cents an hour, making a total of one dollar and twenty cents. He would have had fifty-two bushels more oats at twenty-five cents, or thirteen dollars less the cost of treating, or eleven dollars and eighty cents net profit, as a result of reading 'Wallaces' Farmer' and taking its advice.

"How to do it. Call around at your druggist's the next time you go to town and ask him if he has any formalin. If he does not have it, tell him that you and your neighbors are going to have clean oats next year, and he had better buy a lot. Buy a pound of it and put it into a barrel, holding about forty-five gallons, of clean water, and stir it up. Then get out your seed-oats, spread them about three or four inches thick on the barn floor, take your sprinkling-can, and sprinkle, then stir them up until you get all the grains wet; then put on another layer, and sprinkle that, then shovel them up into a pile and spread gunny-sacks over them until the next day; spread them around once or twice until they are dry, then sack up until you are ready to sow. Now that is all there is to it. Had you not better pick up this eleven dollars and eighty cents net profit for every twenty-five acres of oats you are going to sow next year?

"But this is not all. You are going to plant some potatoes next year, and you will have need for more formalin, and you will need a stronger solution this time. If you have only a small amount of potatoes to plant, fill the barrel only one third full of water and put in a full pound of formalin. Before you cut your potatoes and before they are sprouted put in as many as it will hold and have all the potatoes covered with the solution. Let them stay there three or four hours, then take out, cut and plant. You can use this solution five or six times.

"Now be careful. Do not use the potato-solution for grain-smut. That is, do not put your oats in the strong solution. It is too strong for that. Do not use the oat-solution on potatoes. It is not strong enough to do the business."—Wallaces' Farmer.

WE CAN have only the highest happiness by having wide thoughts and much feeling for the rest of the world as well as ourselves. —George Eliot.

Basic Slag or Thomas Phosphate

The material known as phosphatic slag, basic slag, odorless phosphate, and also as Thomas phosphate powder, is a by-product in the manufacture of steel from phosphatic ores by the basic, or Thomas, process, in which phosphorus is eliminated from the pig-iron by means of a basic (rich in lime) lining to the Bessemer converters, and by adding lime to the molten pig-iron. The slag is therefore rich in lime (about fifteen per cent in the free state and forty per cent combined with other substances). The phosphoric-acid content of the product as found in the market is very variable, ranging from ten to twenty-five per cent. Slag of average quality contains fifteen to twenty per cent of phosphoric acid. In good slag eighty per cent of this phosphoric acid should be available, as shown by the chemical methods of determining availability—that is, by treatment with a solution of citric acid or ammonium citrate. Phosphoric acid of slag, unlike that of superphosphates, is practically insoluble in water. Recently attempts have been made with some success to prepare a slag in which the phosphoric acid is more available by fusing the product as obtained from the converters, at about nine hundred degrees centigrade, with sufficient silica (quartz) to convert the free lime into silicate. Such slag differs materially from the untreated product not only in containing a higher percentage of available phosphoric acid and of silica, but in being practically devoid of free lime. Basic slag is not suited to the manufacture of superphosphates, and is therefore generally used without any treatment except fine grinding. Purchasers of Thomas slag should insist on it being very finely ground, as the value of the material depends very largely upon its fineness.

Slag has been used in large quantities in Europe for a number of years. In 1899 one million six hundred and fifty-five thousand tons of slag are stated to have been used in Europe. Of this, eight hundred and ninety-five thousand tons were used in Germany and one hundred and seventy thousand in France. In 1885 the use of this material was practically confined to Germany, and amounted to only five thousand tons. The total consumption of phosphatic fertilizers in Germany in 1899 was one million eight hundred and sixty-four thousand tons; in France, two hundred and forty-five thousand tons—showing that nearly half of the phosphatic fertilizers used in these countries was Thomas slag. Slag has not been extensively introduced into the United States. The larger part of that used in this country is imported from abroad. Some has been manufactured at Pottstown, Pennsylvania, and it is expected that the slag will soon be made at Birmingham, Alabama, and probably elsewhere in this country in the course of time. The use of slag, however, is increasing in this country, and it is important that farmers should be informed as to the composition and character of the material, so that they will not be misled by false or extravagant claims regarding it. Many of the stations have examined the product, and a number of them have experimented with it as a fertilizer. These experiments have shown it to be a very valuable phosphatic fertilizer, and on account of its high percentage of lime especially suited to use on acid soils and those rich in organic matter. It would not be wise to use it freely on poor, sandy soils deficient in organic matter. Dr. C. A. Goessmann, of the Massachusetts station, says, in a recent report of that station, "Summing up the results of the past, it will be admitted that a genuine phosphatic slag, judiciously applied, has proved a valuable addition to our manurial resources, and that its use is only limited by its supply at a reasonable cost." In the same report Prof. W. P. Brooks gives an account of experiments extending through several years, which show that slag and dissolved bone-black are about equally effective, taking into account the after-effects of the slag, while the cost of the latter is nearly twice that of the former. In experiments at the Maryland station "slag phosphate produced a greater total yield and at less cost than the average of the soluble phosphoric-acid plats."

Slag appears to be especially suited to leguminous crops. Six hundred to one thousand pounds an acre is considered a liberal dressing. It should not be mixed with ammonium sulphate before use, since its high percentage of free lime is likely to cause a loss of ammonia by volatilization. Mixtures of the slag with other salts, such as muriate of potash and nitrate of soda, cake badly and are difficult to handle and distribute uniformly.—Farmers' Bulletin No. 144, United States Department of Agriculture.

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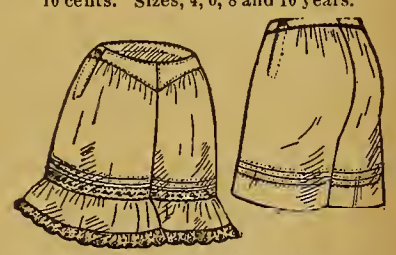

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FARM SELECTIONS

Dried Blood for Calves

Mr. J. V. W., of Story County, Iowa, reports very favorably on the use of dried blood as a feed for calves, stating that his calves have made excellent growth and had been free from scouring. He gives his calves a heaping teaspoonful of dried blood twice a day.

The first person to use dried blood in a feeding way in this country, so far as known to the writer, was Prof. J. W. Sanborn, then of the Missouri Agricultural College, who used dried blood in 1886 for furnishing protein in experiments with pigs. The writer of this reply likewise used dried blood in 1887 in pig experiments. In these experiments it was shown that dried blood tended to build up the muscular framework of the animal. This was a natural result from the use of a food so rich in protein as is dried blood. The question seems to have rested largely in the state left by these early experiments until it was taken up by the Kansas Experiment Station recently. In a press bulletin issued June, 1901, Otis reports the successful use of dried blood for calf-feeding. As with our correspondent, the Kansas station found that dried blood checked scouring in calves and helped bring good gains. Their recommendations are to feed a teaspoonful of the dried blood with each feed in case of scours, and for weak calves to use a teaspoonful at each feed. To prevent the blood from settling to the bottom of the pail, where the calf is unable to get it, Otis recommends that the blood be stirred in the milk while the calf is drinking, or that the calf be allowed to drink the mixture. He further recommends that in ordering dried blood its intended purpose be stated to the packers or others supplying it. This last precaution is doubtless necessary, because there are different qualities of dried blood sold.—W. A. Henry, in Breeders' Gazette.

RECENT PUBLICATIONS

BOOKS NOTICED

Insects Injurious to Staple Crops. By E. Dwight Sanderson. Illustrated. Cloth. Price $1.50. John Wiley & Sons, New York.

Minette, A Story of the First Crusade. By George F. Cram. Illustrated. Cloth. Price $1 50. Published by John W. Iliff & Co., Chicago.

CATALOGUES RECEIVED

Arthur Cowee, Berlin, N. Y. Special Pan-American catalogue of Groff's hybrid gladioli.

T. S. Hubbard Co., Fredonia, N. Y. Descriptive catalogue of grape-vines and small-fruit plants.

Archias' Seed Store, Sedalia, Mo. Catalogue of seeds, bulbs, fertilizers, tools and poultry supplies.

Lewis Roesch, Fredonia, N. Y. Illustrated catalogue of grape-vines and general nursery stock.

Green's Nursery Co., Rochester, N. Y. Illustrated nursery catalogue in handsome colored covers.

The Upland Nursery Co., Bridgeport, Ohio. Illustrated catalogue of everything for the fruit-grower.

The Ohio Cultivator Co., Bellevue, Ohio. Handsome catalogue of the famous "Ohio" line of cultivators.

L. L. May & Co., St. Paul, Minn. Illustrated catalogue of Northern-grown seeds, plants, bulbs, etc.

D. M. Ferry & Co., Detroit, Mich. Handsome seed annual, listing a full line of garden, field and flower seeds.

Frank S. DeRonde Co., New York. Descriptive circulars of "Ruberoid" roofing and "Lythite" cold-water paint.

The Saginaw Basket Co., Saginaw, Mich. Catalogue, illustrated with half-tones, describing all kinds of fruit-packages.

Prairie State Incubator Co., Homer City, Pa. Handsome catalogue illustrating and describing incubators and brooders.

Enterprise Windmill Co., Sandwich, Illinois. Hanger illustrating in colors the Enterprise windmills, towers, tanks, pumps, etc.

P. M. Sharples, West Chester, Pa. Calendar hanger describing the Sharples cream-separator and butter and cheese apparatus.

The Storrs & Harrison Co., Painesville, Ohio. Illustrated nursery catalogue. Plants, trees, vines and seeds by mail a specialty.

Elbert G. Packard, Dover, Del. Circular of field crops for forage and soil improvement—cow-peas, soy-beans, crimson clover, sorghum, etc.

The Warder, Bushnell & Glessner Co., Springfield, Ohio. Illustrated catalogue describing in detail the Champion binders, mowers and hay-rakes.

The Griffith & Turner Co., Baltimore, Md. Illustrated catalogue of farm and garden supplies—vegetable, flower and field seeds, garden and farm implements, etc.

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Where the Fruit-Trees Come From—By A. S. Hoffman

FAR back in the mists of tradition and scientific hypothesis we must look for the origin and explanation of the common fruit-trees of yard and orchard. All came from some wild, nearly useless half-fruit of Asia. Gradually they crept westward, by Persian and Arab, Greek and Roman, Celt and German, by Pagan, Christian, Mohammedan and Druid, until they, like men, have circled the globe, and to-day the United States sells fruit to China. And from that first rough sheltering and pruning and watching by our Asiatic forebears, from the scientific treatment of the old Romans, and the still more advanced methods of later centuries, they have gained one thing and lost another.

It was a man's stomach that wrought the change. He wanted fruit to eat, and anything that improved the fruits at his disposal was forthwith done. Gradually the fruit became more palatable, but gradually the seed lost that mysterious attribute of all live nature, "fidelity to sort," or the power to produce a second generation like the first.

The work of the nursery is twofold. First, it may originate new varieties. Second, it must raise great numbers of existing varieties for market. The former lies outside the regular "line," and is generally confined to amateurs. Most new varieties are originated by chance—that is, the artificial tendency to improve is found stronger in some rare instance than Nature's tendency toward reversion, and a seed grows into a tree of improved qualities. Thousands of seeds, generally from partly wild trees, are planted and cultivated. When they bear, seeds are taken from the best and planted for a second generation, the most promising seeds of these for a third, and so on, until finally a very few valuable varieties may result.

A quicker, surer and more scientific method is "cross-breeding," foreshadowed and hoped for by Lord Bacon. The flower is the point of attack. Now a seed is formed by dusty, yellow pollen from the stamens of a flower falling on the pistil and fertilizing it, without which the pistil remains sterile and its ovaries never attain the power of seed-development. Suppose the gardener has two varieties of plum, each possessing some good trait, and wishes to start a third variety that will combine both the good traits. From several of the blossoms on one tree he extracts the stamens before maturity, and so prevents the usual fertilization. The next day with a camel's-hair brush he takes the perfect pollen from a blossom on the second tree and applies it to the sticky pistils of the flowers prepared the day before on the first tree. Then he covers carefully, to prevent molestation by wind, humming-birds or bees or other insects. Thus one tree is the mother, the other the father, to the seeds formed by these particular blossoms, and when their seeds have become bearing trees they stand a good chance of "taking after both sides of the family." From these the nurseryman raises in his own way—not by seed—countless other trees like them.

AMONG THE ORNAMENTALS

How is it that we have so many fruit-trees if raising from the seed is well-nigh impossible? Granted one tree of a given variety, how can we produce other trees from it in quantity sufficient to meet the demands of the market? Cut it up into small pieces a few inches long, and make a whole tree out of each piece. That is the nurseryman's solution, and he does it by "grafting," or splicing, these pieces on the roots of other trees, grown for the purpose. It is by no means a modern art. The Romans were far along in the scientific cultivation of fruits, and practised many methods as ingenious as those of to-day. The secret is that the cultivator, the seed proving untrustworthy, has looked elsewhere for "fidelity to sort," and has found it in the inner bark, through which runs the sap, or life-blood, of the tree. Always the inner bark has this peculiarity, that it forms under it its own kind of tissue, so that the grafted piece, or "scion," of the desired variety, despite the sap from the alien root or "stock," builds itself up into a tree of its own kind.

During drives through Ohio's Miami Valley my attention was attracted to great fields, solid green, with long rows of closely planted, knee-high bushes, giving the whole the appearance of a vast patch of dwarf raspberries. They were young trees being raised for stocks, and there seemed to be millions of them. Later in the season I visited one of these nurseries, and saw several car-loads of tiny trees, their roots wrapped in moss, being unloaded and stored in the large barn-cellars. When asked how long it would be before these trees bore fruit, a grinning overseer answered that not one of them ever would, for all would be cut off close to the ground soon after planting. And the same fate awaited the seedlings seen in the field. Yes, seedlings; for if he cannot count on the seed for fidelity to sort, at least the nurseryman has no trouble in raising from the seed sturdy young trees that will do well for roots. In fact, many nurseries make a business of growing stocks.

Nearly all the apple stocks come from Kansas. Most of the pear, cherry and plum are imported from France, and peach stocks are grown from seed shipped from the mountains of Tennessee. In the spring the seed is sown by a drill, and when autumn comes the young trees are taken up and stored in cellars, so that they will not be moist enough to rot, dry enough to die, cold enough to freeze, nor warm enough to grow. Along with them are stored switches from trees of the desired variety, ready to be cut into scions four inches long when grafting-time—December, January or February—arrives.

Grafting is done indoors, and many are the ways thereof; but in all methods the gardener must make sure of this point, the inner bark of stock and scion must meet. The wound or joint is bandaged with grafting clay, wax or waxed paper, and in the spring the Siamese twins are set out in "nursery rows" three or four feet apart, and a foot apart in the row, so that only one bud or eye of the scion is left above-ground to grow into the desired trees.

The planting is done by hand, though machines, like tobacco-planters, are coming into use. Through the season care is taken that all the energy of the roots is devoted to this one bud, and its growth is so remarkable that the tree is ready for the market in one, two or three years from graft, according to the species.

Their digging is an interesting sight. The "digger" is a stanch, half-circle, knife-edged plow. A double line of from six to twenty horses forces it from one end of a row to the other, cutting off the root-tips at the sides and underneath, and leaving a thousand trees ready to be pulled or spaded up, shaken free of earth, counted,

[CONCLUDED ON PAGE 5]

A NURSERY SCENE—A BUDDING GANG

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A cross-mark in the white space to the left means that we want to call your attention again to the

Prizes for You

offered in the great Crop-growing Contests described on Page 18 of this issue of the FARM AND FIRESIDE. We want you to enter these contests, either one or all of them. You ought to win a valuable prize. We will send you your seed or plants at once on hearing from you.

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WITH THE VANGUARD

SINCE the invention of the telephone the experience of men with the applications of electricity has been so broadened that Marconi's wonderful achievement in sending wireless telegrams across the Atlantic is not a subject of marvel. Indeed, it was but the realization of anticipations. If ten years from now communication be established between the earth and Mars, or some other planet, men would marvel hardly as much as they did at the telephone.

THE bicycle aided the cause of good roads. Rural mail delivery is helping. And now comes the automobile as an agitator in the good cause. Friends of improved highways need all the assistance they can get.

AT A recent dinner of the New York Ohio Society Senator Hanna made a brief, forcible address on labor and capital. In part he said:

"The great natural resources of our country coupled with the terrific energy of our cosmopolitan people have made us what we are—a people whose capitalists of to-day were the laborers of yesterday. The men who are at the heads of our great iron and steel industries in this country are the men who worked first at the puddle, the furnace and the roll. There stands the aristocracy of labor; not the aristocracy of blood, but the aristocracy of brains and brawn.

"We have gone ahead in this country until now, for the first time in our history, capital stands alone on its own foundations. We are to-day a creditor-nation, and fast becoming the money-center of the world. It surely is not strange that this question of capital and labor is being forced to the public attention. It is not strange that the men who do things should begin to consider that problem from a social standpoint.

"If the development of wealth is to make us strong in this country we should see to it that all who contribute to the development of this wealth have fair and equal consideration. The men who work with their hands are as much a part of this wealth as the men who work with their brains, and they are entitled to a share of all the good that comes from it.

"And now I want to say a word to you about the Civic Federation. It is a new-born organization, but it is not a new-born subject. It is a culmination of that concrete thought which has led thoughtful and reasonable men to consider something outside of their own selfish interests. No man loyal to his country will shut his eyes to the importance of this thing.

"The man of little education and small opportunities appeals to you to lift him up, and not by word or act to keep him down. Therein lies the social elevation of the country. The Federation has started in with the idea that there shall be no class, no one man better than another.

"It is the object of the Federation to appeal to the American people who employ labor—the great captains of industry—to join in this movement, and when they do this it is the beginning of things never thought of or dreamed of before. To those few who are laboring in this vineyard now there comes nothing but praise and commendation from every part of the country.

"I want to take this opportunity, too, to thank the great press of the country for its assistance in bringing capital and labor together, and making them sit face to face and heart to heart. When men sit down together in this way to consider things in a spirit of fairness there can be no such word as fail. Our membership should only be limited by the population of the United States, and the purpose for which the Federation is laboring should receive the support of the people of the whole country. And I want to tell you that when capital and labor can thus meet face to face and heart to heart we have only begun to lay the foundation of our future greatness."

A BILL has been introduced into Congress to amend the immigration laws of the United States. One amendment adds to the classes of excluded aliens the following:

"All persons over fifteen years of age, and physically capable of reading, who cannot read the English language or some other language; but an admissible immigrant or a person now in, or hereafter admitted to this country, may bring in or send for his wife, his children under eighteen years of age, and his parents or grandparents over fifty years of age, if they are otherwise admissible, whether they are so able to read or not."

The worthy object of the measure is to restrict undesirable education. The educational test has been adopted as the best means ready at hand of limiting immigration. The reasons for adopting it are practical. The main reason is:

"Because it has been found as an actual fact that the classes whom we wish to exclude—that is, those who are ignorant of any occupation, who are on the whole incapable of appreciating our institutions and standards of living, and who are very difficult of assimilation—contain a very large proportion of illiterates, and that by adopting the educational test this class of immigration can be very greatly reduced."

The annual immigration is now nearly one half million, and over twenty-four per cent of the immigrants are illiterate. Immigration has been changing in character. There is a rapid increase in numbers from eastern Europe, and a corresponding increase in the average illiteracy. Less than six per cent of the immigrants from western Europe are illiterate. Forty-six per cent of the immigrants from eastern Europe, with Spain, Portugal and southern Italy now furnishing one half, are totally illiterate. These few facts are sufficient to show the value and imperative need of an educational test as a means of excluding undesirable immigration.

GOVERNOR NASH has done the square thing. His appointees on the new Board of Control of the Ohio Experiment Station—all farmers—are men of brains and business and leaders among their fellow-men. They are Ex-Senator Friend Whittlesey, Portage County; Alva Agee, Gallia County; D. D. White, Erie County; O. E. Bradfute, Greene County, and D. L. Sampson, Hamilton County. The geographical distribution is good, and the leading branches of farming are ably represented. March 3d the board met and organized by the election of Mr. Agee as president. The following day it visited the station, examined affairs thoroughly, straightened out the tangles, accepted the resignation of the entomologist and re-elected Mr. Thorne director.

Agricultural News-Notes

Watsonville is the principal apple-growing region in California. Owing to the light apple crop in the Eastern states over one thousand car-loads were shipped from there.

The editor of the New York "Journal of Commerce" hits the nail "squarely on the head" when he says, "The more generally and effectively the manual labor of the world is aided and directed by the brain, the higher is its efficiency of wealth production."

The Golden State Asparagus Company of California has one thousand five hundred acres of fine land in one body on Bouldin Island, in the Sacramento River. The yield of asparagus an acre, when grown under favorable circumstances and trimmed for the cannery, ranges between four and five thousand pounds.

Farmers in the Eastern and central Western states are beginning to find out that there are many better money-making crops than the ones most commonly grown. Andrew Carnegie says, "It is manufactures which bring population." Population is what the farmer needs to consume the most profitable, which are usually the most perishable, products that he raises.

Experiments made at the Colorado Experiment Station show that sugar-beets after harvesting will shrink in twenty-four hours five per cent, and two per cent daily thereafter. Farmers are known to have lost quite largely by delaying shipment after digging.

The pulp of the sugar-beet after the water has been pressed out of it can be dried or evaporated in the same manner as fruit. The dried pulp is now being shipped to Germany, where it is fed to live stock. The Detroit Sugar Company is now experimenting with the fresh pulp as a fertilizer.

Fruit-growers would do well to take notice that the Peninsular Fruit-Growers' Association, having a membership of three hundred or more, recently met at Dover, Del., and after a thorough discussion of the matter respecting the question of shipping the peach crop in what is known as "carriers" instead of baskets now in use, unanimously decided to continue the use of the five-eighths-bushel baskets.

As to the beet-sugar industry there are now fifty manufactories in the United States, and two in operation in Canada. Nearly eight million dollars have already been invested in Michigan, and nearly sixty-five million tons of beets are required for manufacturing into sugar. In 1901 the farmers received three million dollars for the beets grown in that state. The average yield of sugar from each ton of beets was about two hundred and ten pounds.

A barrel of apples, which will weigh a trifle over two hundred pounds, costing say five dollars, or about two and one half cents a pound, is infinitely cheaper as an article of food than beef and other meat products at ten to twenty cents a pound. Five pounds are considered an average daily supply for a small family, consequently a barrel of apples would last at least forty days. An increased fruit diet and a diminished one of meat would be highly advantageous from a health standpoint.

Farmers who have been anticipating an advance in the price of corn are evidently making a mistake by holding it. Too many are sending light-weight hogs and cattle to market instead of feeding their corn. Better feed the corn on the farm and sell it in the form of pork and beef than to expect higher prices than now prevail. Choice seed-corn is needed where the drought cut off the crop last season, and will command a relatively high price.

Alameda County, which is just across the bay from San Francisco, is extensively engaged in growing rhubarb for the California and Eastern markets. In the immediate vicinity of San Leandro fully five hundred acres of the rich land, valued at five hundred dollars an acre, are devoted to the culture. Chicago is the main market. It is shipped in forty-two-pound boxes, of which five hundred and sixty make a car-load. The shippers are satisfied with a return of one dollar a box. An abundant supply of rhubarb invariably exerts a marked influence on the price of apples.

The Industrial Commission appointed by Congress has made several important recommendations, not the least of which in direct value to producers is that "No rate of classification (relating to freight-rates) ought to be changed without at least sixty days' notice to shippers, unless specifically authorized by the Interstate Commerce Commission; that strict adherence to published rates be required, and rebates for discrimination be prevented by an increase of the penalties."

The rule governing crop-reporting in stating the condition of the growing crops preceding harvest, and the yield immediately after harvest, is as follows: In reporting condition one hundred is used to represent a fair, seasonable, average vitality or growth unaffected by unfavorable circumstances, such as injury by insects, storms, etc. An increase of one tenth, or ten per cent, is recorded 1.10; a decrease of five per cent is marked .95, etc. The percentage method of reporting ought to be quite easily understood.

By combining together the truck-growers of Cecil County, Maryland, have succeeded in making a contract with the tomato-packers in that locality, whereby they have secured an increase of two dollars a ton over last year's prices, which was six dollars a ton. The usual yield is from eight to sixteen tons an acre.

The growing of flaxseed in North Dakota is becoming an important and paying industry. The present price a bushel is one dollar and sixty cents, while that of wheat is but sixty cents. Flaxseed is a very exhaustive crop.

According to a leading commercial paper there were shipped from this country to Europe in one year three hundred thousand tons of cotton-seed meal, which brought in return five million five hundred thousand dollars, but carried to other lands seven million five hundred thousand dollars' worth of fertility. If this cotton-seed meal had been converted into meat products for export the value received would have been greater, and the fertility retained on the farm.

Prof. H. P. Armsby, of the Pennsylvania Experiment Station, in speaking of the true scope of experiment-station work, says, "The aim is to make farming an intelligent occupation. Independent, original investigation is the ideal work of the experiment station. Information is desirable, and its best use is that of enabling the recipient to strengthen his grasp on the great principles which underlie agriculture. The field of mind should be plowed deeply and thoroughly cultivated if desirable results are to be attained."

W. M. K.

RURAL AFFAIRS

Raising Good Cows I like to fuss with calves. I like the calves because I like good cows and realize the fact that the foundation of a good cow is a good calf. Sometimes I come across a good cow that can be bought at a reasonable price, but the surest way to get a good cow is to raise her from a calf of known good parentage. There are people who yet believe they can feed butter-fat into milk. My experience, however, is that when you have a cow that gives blue milk, blue milk she will make, even on the richest kind of food, and when it is given to her in fullest supply. And when you have a cow that gives rich, creamy milk that butter-makers and milk-consumers like, rich milk she will give even if she has nothing but corn-stalks or poor hay to eat. Feed determines the quantity of milk, while the blood of the animal determines the milk's richness. For that reason it does not pay to bother with calves of blue-milk stock (unless for selling milk, and hardly then). Nor does it pay to fuss with a calf that for any reason is lacking in individual vigor. But any vigorous heifer calf of good stock is too good for the butcher when it is so easy to make a good cow out of it in not more than two years' time. The Guernseys and Jerseys have the reputation of giving the richest milk. But there is yet a great difference in this respect in individual cows, or perhaps rather in cow families. Just at present I am raising a calf from a Jersey dam, whose milk contains more butter-fat than I have ever seen in milk before. Not having much milk on which to bring this calf up, I have tried milk substitutes, especially clear flaxseed-meal and a calf meal. I began giving flaxseed-meal on the third day by the teaspoonful, gradually increasing to two handfuls at a feed in the fifth or sixth week. The meal was put into a pail, and boiling water put on it, making a thin soup, which was mixed with what skim-milk I could spare for the purpose, and fed blood-warm. At six weeks of age the calf meal—which seems to consist mostly of flaxseed-meal or oil-meal—was substituted for the flaxseed-meal, two good handfuls at a feed. This calf also receives dry bran and other ground grains, and eats several handfuls out of its pail, some cut clover hay, etc., and has done so well that I believe it possible to bring up good calves practically without milk, except for a short time on the start.

Fumigating for Scale-louse Fumigation is a familiar subject of discussion at fruit-growers' meetings whenever there is an inquiry or talk concerning the methods of fighting the San Jose scale-louse. There is not much hope of fumigation for this pest getting to be a popular or common practice among the general run of farmers or fruit-growers. It can hardly be called a practical solution of the San Jose problem, so far as average people and average orchards are concerned. It is possible, perhaps easy, to fumigate small trees—that is, trees not much over ten feet in height or eight feet in diameter. But fumigation is out of the question with large orchard trees. If we wish to destroy the San Jose scale on our larger trees we have no better way than to spray with crude petroleum or kerosene, with or without water, or with the California sulphur-salt-lime wash, which thus far has not found much attention among us in the East. Yet if you have a young orchard, with trees within the size before mentioned, infested with the scale-louse, it will surely be worth your while to fumigate your trees and make thorough work in clearing the scale out. This means the exposure of every tree for half an hour to the fumes of hydrocyanic-acid gas. There is nothing mysterious nor particularly difficult about the generation of this gas. Into a low, open dish put eight ounces of water. Slowly add five ounces of sulphuric acid, and finally drop into this three and one half ounces of cyanide of potassium, the latter broken into small pieces (not left in big lumps). Nobody should forget for a moment, however, that the gas thus generated is a deadly poison. You may safely expose your trees to it for half an hour, but you should not go where you can breathe it even for a few seconds. Nor should we forget that care is required in handling corrosive things like sulphuric acid, or in mixing it with water. To properly fumigate trees of the size mentioned, construct several canvas-covered tents or boxes, about eight feet square and ten or twelve feet high, open at the bottom. By means of a pulley hung to a small derrick such a tent may be lifted up and lowered down again over a tree, tightly inclosing it. The vessel with the water and sulphuric acid is placed underneath, the cyanide dropped into it, and the tent quickly lowered to stand solidly on the ground. A few shovelfuls of loose soil must be thrown closely around the tent to close up any possible avenue of escape for the gas. In thirty minutes the tent may be removed and adjusted over another tree. Instead of using a hoisting device, one side of the tent may be made removable, so that the tent can be placed over the tree from the side. This door must be made to close absolutely tight. Before replacing it the vessel containing acid and water is set upon the ground inside the tent, and the cyanide suspended just above it on a string, the other end of which passes through the side, and allows the operator to lower the cyanide into the vessel from outside the tent after everything is made tight and in readiness for gas.

The lime-salt-sulphur wash has been used with beneficial results for the San Jose scale in California. The recipe is as follows: Thirty pounds of lime, ten pounds of salt and fifteen pounds of sulphur. Boil together in sixty gallons of water from forty to sixty minutes. Apply in a spray. Professor Johnson at the meeting of the New York State Fruit-Growers' Association at Syracuse, New York, in January, stated that this remedy has in every case given better satisfaction than any other, and that he believes it is the coming remedy, on account of cheapness and efficiency, but difficult for us to handle while we are not yet used to it. I have not learned of its having been tried anywhere in the East.

New Forage Crops The forage crops seem to offer a promising field for the introduction of worthless novelties. Several new perennials have recently been lauded to the skies by the trade, only to be dropped again like hot cakes after a few years' trial. Pearl millet is one of the fodder plants of more recent introduction. It may have a place, but can hardly be recommended for general culture. The Massachusetts Agricultural Experiment Station now gives warning that Pearl millet is being offered under new names—namely, as "Brazilian millet" and "Wonder millet." This millet may have value for light, dry and warm soils, but if you wish to try it, better buy it under its true name and at the common old prices (not over one dollar a peck) than under the new names at fancy figures. It takes only a few quarts to sow an acre if sown in drills two and one half feet apart. Another novelty is the "Billion-Dollar" grass, which is a new name for the Japanese, or barn-yard, millet, a coarse grass that will do nicely for silo, or possibly forage, but not for hay.

Insects for 1902 Insects, like people, have their ups and downs in life. They flourish, and then again they perish. The potato-bug may be abundant and destructive one year, and a scarce article the next, and not even Cornell's bugman (who is often supposed to know everything concerning bugdom) or any other bug-expert can tell what became of them or why they so suddenly disappeared. I state this on the authority of Professor Slingerland (Cornell), who admitted his ignorance in regard to the causes of these ups and downs before the Western New York Horticultural Society at Rochester in January, 1902. The forest and apple tree tent-caterpillars seem to be on the decrease, likewise the canker-worm, he says. The Hessian fly also appears to have reached its climax, and probably will give less trouble after this. Its insect enemies are perhaps multiplying to such a degree as to cause this result. The late-sown wheat is more liable to escape the ravages of this fly. In 1901 about one half of the crop was destroyed by it. The best plan yet devised is to sow trap-patches early, then plow these under, and sow for the crop as late as is practicable.

Trap-lanterns Professor Slingerland's report was far from favorable to the trap-lanterns and its sellers. It is true that trap-lanterns will catch May-beetles, some cutworms and perhaps a few more noxious insects, but to make up for it, it catches also a whole lot of beneficial insects. It will not attract codling-moths, weevils and most of the other seriously injurious insects. The new trap, for which preposterous claims have been made by people interested in its sale, has no point of merit over older similar devices, and the evidence is all opposed to the use of any of them. At least he sees no reasons for recommending it. No question he is right. So all that remains for us to do is to fight the insects in the old way—usually by spraying.

T. GREINER.

SALIENT FARM NOTES

Owning a Little Home Eight years ago a tenant-farmer told me that he had moved seven times in the twelve years he had been farming. Said he, "I really believe that I have been damaged full three hundred dollars by the moving about. Furniture and other things get racked up and broken, and carpets and curtains never fit, but how can a fellow help it?"

"Easy enough," I replied. "Build a home of your own on your own land."

"But," said he, "I have no land to build on. If I could only raise enough to buy an eighty-acre farm I'd be fixed; but the price of land is rising higher every year, and the chances for a poor man like me are getting slimmer every year. What is a fellow to do?"

I informed him where he could buy two acres of good land on the corner of a man's farm, two miles from town, for two hundred dollars in cash, and on that he could build a small house and establish a home that would be a real home, and from which no man could move him. He would have half an acre for buildings, half for garden and fruit, and one acre for crops of some sort that would be useful for himself or stock. But the main point gained would be a home of his own, a home that he could improve as he wished and from which he would not have to move. He could rent land near and farm as he is now, but he would live in his own home. I told him as emphatically as I could that he had best do that while he had a little money, for a single failure of crops might leave him stranded and unable to buy anything. He did not like the proposition, and did not buy. He has moved twice since that time, and the crop-failure of last year about broke him up.

There are hundreds like him. They would like to own land instead of renting, but less than eighty acres is not to be thought of for a moment. Eighty acres of good land costs a small fortune, and they do not have the fortune, and they never will have it. I know quite a number of tenant-farmers who possess between three hundred and a thousand dollars—enough to buy two to five acres of land and put up a little house on it and establish homes of their own; but instead of doing that they are working away their lives, hoping that some good fortune will sometime enable them to buy an eighty-acre farm. Some of them meekly expect to continue tenant-farmers until they become too old to labor in the field, then to move to town, rent a little house, and live their days on what they have saved.

In an adjoining county lives a man who seven years ago bought five acres on the corner of his landlord's farm, built a home on it, and continued to rent and farm as before. Three years later he added five more acres to his first purchase, and two years ago he raised nearly six hundred bushels of corn on that five acres. It happened that he was unable to rent more than twenty acres that year, and as half of it was sown to oats he had only the fifteen acres of corn to tend, and he put half the work on his own five acres, with the result mentioned. He is now a strong advocate of "intensive" farming, and last year, droughty as it was, he succeeded in growing nearly sixty bushels an acre on his five acres of "home farm." In a conversation we had about his methods and success he told me about a neighboring tenant-farmer coming to him and asking his advice about buying a ten-acre tract that was for sale near him.

"What do you want to do with it?" he asked his caller.

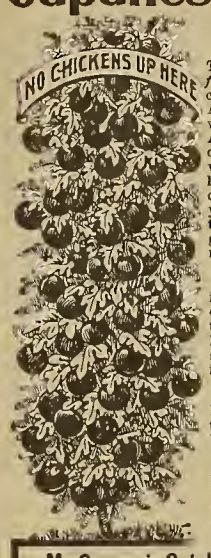
"Live on it like you are living on yours," he replied.

"Yes," said he. "Sow half of it to grass, and grow a few potatoes and lots of weeds on the other half! Guess you'd best not buy it. If you intend to grow the biggest crops ever grown on that amount of land in this country you had best buy it at once."

The man was somewhat nettled by the "advice" given him, and to show what he could do bought the land and grew about seven hundred bushels of corn on it the first year, and nearly eight hundred the next. He hauled manure to it from town all winter, and covered the entire tract. When not farming he is hauling manure from town, and he declares that he will make it yield him a full twelve hundred bushels in one year. These are the sort of men that can make a good living on a small tract of land. A live, wide-awake man can make more from a thoroughly tilled ten-acre farm than the average tenant can from eighty acres, and every atom of improvement he puts on it is his own, and he gets the full benefit of it.

FRED GRUNDY.

Japanese Climbing Wonder



This discovery in tomatoes is a *perfect wonder*, and the most magnificent in America. It is new to American people, and every one who grows tomatoes should have it. At enormous expense I secured a quantity to offer this spring. It is very early ripening in Canada, large perfect fruits, beautiful red color, very solid, and few seeds. If you once get seed you would not take $5.00 for it, because it must be grown to be appreciated. You cannot obtain this seed elsewhere.

Sure Crop Cabbage is the earliest in the world. Sure of a crop, and sure to head every time. Excellent quality, good keeper, and first introduced this spring. You will have first cabbage in your neighborhood if you plant it.

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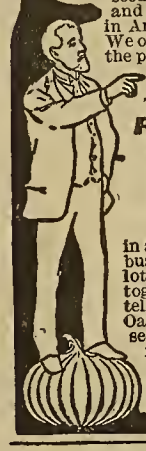

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OUR FARM

Farm Theory and Practice

ABANDONING WHEAT.—Recently a leader in agricultural work said that there should be no time given to discussions on wheat-growing in our Eastern states of the winter-wheat belt for the reason that this crop should be abandoned by us on the score of unprofitableness. Is this true? Many farmers are saying that wheat does not pay, and if there is no pay in it the sooner we abandon wheat to the spring-wheat regions the better. They can produce it cheaply. There are limited areas, having splendid markets for all the fruit, vegetables and milk they can produce, and for them wheat has ceased to be desirable, but these areas are relatively small. If wheat and grass did not occupy an immense acreage of the states east of the Mississippi, and if this land could be brought into direct competition with that producing the more costly products, the overproduction of the latter would be overwhelming.

These questions should be viewed in a rational way. It is nonsense to talk about using all the present wheat area in these states for the production of these crops. There are reasons why this cannot be. Much of the land is not in proper condition for anything but wheat at the time seeding is done, and if it were there would be no market for the products displacing the wheat. Time may bring a change in conditions, but this is far in the future.

HOW WHEAT PAYS.—It does not do to engage in that which is unprofitable. If it is necessary to grow wheat in these states it is only because it pays in some way. The returns from wheat are not all in the cash gotten from the grain. If this were true the outlook would be rather dark. The cash returns from the grain is not very satisfactory. Wheat is the great nurse-crop for a seeding of clover and timothy. There is some land that can be seeded to clover or to timothy without any grain crop with advantage, but on the other hand a far greater area will bring in more money in a term of three years if the first year is given to wheat. The straw is a big item. Fertility is running away from farms in stables and barn-yards, and in many cases more absorbents should be used. The waste in this direction is a big drain on the profit in American farming. If straw were less abundant, conditions would be worse. It is nearly impossible to estimate the value of a ton of straw when needed as an absorbent in our stables. The grain forms only a part of the returns from a crop of wheat. There is the additional consideration that on many farms the labor of preparing for this crop comes at a time when the teams would not otherwise be employed.

PLOWING POTATOES IN.—There is an old method of planting potatoes, practised by many farmers in some localities, that may be new to most of our readers, and that is dropping the seed in every third furrow when breaking the ground. The plan is not a good one except for the farmer on a light soil who will not plant deep if he does not drop the seed while breaking the ground. In such ground the seed should be put deep, and when ground is prepared and then furrowed out very many do not get the seed nearly as deep as they imagine. This old way of planting has the one virtue of putting the seed down. The sprouts come up between the furrow-slices, and in a light, loose soil the depth of covering does not injure the plants. But it would be better if the ground were well plowed and pulverized before planting, and the seed were then put into deep furrows and covered shallow. In a heavy soil deep covering is especially bad. The light and air are too much excluded, and in a wet season the plants will be made spindling. By the old method mentioned some farmers get good results in a dry year, but we should now know the benefits of good, thorough working of the ground before seed enters it. If the sod has been torn into pieces properly the planting can be made deep. Let the opening plow throw out a good furrow if a planter is not used, and in some cases it would pay to run the plow through the furrow, thus going over the ground the second time. That gives a clean, deep furrow. Then make the covering very light, so that the plants will get into the light as soon as possible, filling up as the plants grow. This applies to well-drained land. If the soil is wet and heavy, the only thing to do is to keep the seed nearer the surface.

GRAZING STOCK.—It will indeed be a long time before a majority of the farm-animals are kept off the grass-fields that are easily cultivated, but there is a tendency in that direction constantly growing stronger. The advocates of the soiling system state the case this way: The cow has four feet and only one mouth. In grazing her feet do too much harm, packing the soil too much in wet weather. It is beyond doubt that ground does best when not tramped while wet, and it is equally true that much more feed can be produced an acre than an animal gets by grazing. But labor is too high and land too cheap to make soiling popular, except in limited sections. As population increases, and as the possibilities of soiling crops become understood, grazing on all, except natural, pasture-lands will diminish. Now it is little more than a tendency, although the ones practising soiling are strong advocates of the plan. There is a middle ground, however, that has advantages for very many stockmen, and that is a combination of the two methods. The area in pasture may be cut down to the point when it furnishes abundance of feed in the early part of the season, and then some summer forage may be fed upon it or in stables during the hot, droughty periods. Less land is thus required to keep animals on full feed every week of the summer. It is a good idea to plant some crops for summer feeding, helping out the pasture.

DAVID.

From Clover Leaf Farm Window

How little we as farmers appreciate the good things we have, or might have, at the hand of old Mother Earth. A few years ago we did not think it possible for common, every-day farmers to enjoy strawberries of our own growing. We thought we must buy them of some man who made a specialty of raising them, and who must in some way or other be blessed with a gift denied us of winning success that way. Then they used to come to us in poor condition. Either they had been picked when too green and allowed to wither in the baskets, or they were overripe and fit for little except canning. Very rarely did we get a basket which could be called just prime. They almost always gave the master of Clover Leaf Farm the stomach-ache and made him wish he might never see another berry-peddler at his door.

Then I became reckless and determined to take the matter into my own hands for once, and, fearless of results, try my own hand at raising strawberries. I wrote to a grower down on the Hudson, whom I believed to be honest, and asked him what he thought about it. He replied promptly that if I would tell him what was the nature of my soil he would try to pick out some berries which would grow on it. I answered that it was a clay loam. Back came the response, "Try Ridgeway, Clyde, Excelsior and Sample." Then, still more reckless than ever, I paid a big silver dollar for six—only six—Rough Rider plants. Not without some fear and trembling I plowed a part of an old garden, harrowed it thoroughly, pnt on a good coating of manure and waited for the precious plants. Very promptly on time they came. The master of the farm, not daring to trust any one else to undertake the important task, set the plants out with his own hands, drawing a string far across the field and digging the holes so that the rows might be as straight as a gun-barrel. Of course, the plants must be set out just so or they never would amount to anything. Every plant was well watered when put into the earth. The roots were all straightened out, so that there might be no possible excuse for their not growing.

And grow they did. Nearly every plant lived. That summer not a weed or a runner was permitted to show itself above-ground. The horse-cultivator and the hoe came into frequent use. The master of the farm found that one of the best tools for clipping the runners is a pair of sheep-shears. There is no patent on the discovery. It was a pleasure to all to see those plants grow. Anticipation of the coming crop gave added interest to the work. When one or two berries escaped the sharp edge of the shears and grew to a lovely red there was true rejoicing all over the farm. That was the first berry. It had to be divided so that each member of the household might share its delicious flavor.

Then when cold weather came on I drew straw to the garden and gave the plants a warm bed through the cold weather. Not knowing any better I used buckwheat straw, but never will again, for a great many kernels of the grain remained in it, and these grew next year. Early in May the straw was raked off and the cultivator put between the lines. The plants blossomed profusely. It did us good to see how full the clusters were. But this was only a foretaste of what was to come. Berries? Why, we all reveled in them for six weeks! I found that the kind friend on the Hudson had guessed right, and had sent varieties which ripened one after another, so that when one kind began to fail another came on. And such berries! The Little Chick measured one of them one day while it was yet growing on the stem. It was one and three fourths inches one way by two inches the other. How he rejoiced as he came in and reported the result of his measurement. Morning, noon and night we drew drafts on the berry-field, and they were no small drafts, either. The stomach of the master of the farm received the fresh fruit without a sign of protest. In fact, he might be seen often late in the day, after he had eaten his fill at the supper-table, down in the field enjoying the blood-red and luscious berries before going to bed.

But do our best we could not begin to use all that grew on those hundred plants. There was often something left over for the friends across the way, and that seemed to us one of the most pleasant features of the matter. Sharing always is, I think, a sure way of enjoying.

So I have come to the conclusion that I can grow strawberries on Clover Leaf Farm, and I wonder why more farmers do not try it.

EDGAR L. VINCENT.

Some Thoughts About Sheep

Yesterday I witnessed the weighing (singly) of ten lambs, nine of them of Mexican stock, one whose mother was Northern-bred, partly Shropshire. The result set me thinking; and as I am a woman, with neither money, land nor time to carry out my thoughts, I wish to pass them on to some of our Western farmers, and ask if they are practical.

I chanced to know the history of all those lambs. All excepting the little Shropshire were born from mothers shipped in from New Mexico for the fattening-pens. One was bottle-fed, but all the others had received a mother's care and nourishment, and had been generously fed from birth onward. The little Shropshire's mother had died from an overdose of alfalfa when he was yet too young to thrive without a mother, but he had not taken kindly to a bottle, and had finally been allowed to run with the flock, and grew up as best he could, developing at last into but a shadow of what a well-fed Shropshire usually is at his age. Beside some of the Mexicans he looked but half a sheep. Imagine my surprise when he was weighed and tipped the scales at thirteen pounds above what the heaviest Mexican weighed. That was when I began to think.

Does it really pay our farmers to ship in yearly from Southern points lambs whose physical make-up seems to forbid the best results? Not many lambs shipped in have the opportunities for early development accorded these lambs. It is the blood that seems to be at fault.

Why do not our farmers raise more lambs of their own? Before the outside range was so closely taken up more did so, and found it profitable, but now they say their summer pasture is gone and they cannot afford to keep sheep on land available for tillage.

I wonder if that is really true. Most of the men that I know have more land than they can possibly work in a proper manner. They say that the wages of farm-hands are so high as to be almost prohibitive, and that renters are generally unsatisfactory and allow the land to run down and accumulate weeds until it drives one almost completely to despair.

Then why not pasture some nice ewes with their lambs each summer? They would enrich the land and keep the weeds down. The precious irrigating-water, that might run to waste at the hands of the renter or hired help, could be applied to crops in other fields.

One of the drawbacks seems to be the better quality of fencing required to hold and protect sheep. It would be an expense, that is true, but if the tales we hear about renters be true even that would be a saving; and think of the satisfaction of having mutton that is mutton when you come to butcher or sell!

Each farmer might not be able to ship so many car-lots of lambs as under the present method, but so much the better. What he raised would bring enough better price, and there would be less freight to pay.

VELMA V. BEEBE.

Sharples "Tubular" FARM Cream Separators

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Superior as the Sharples Separators have always been, these Tubular machines are far ahead and completely distance every competitor. They are worth double the money because guaranteed under usual conditions to produce enough more butter than the best competing separator to pay fully six per cent interest on the whole first cost of the machine.

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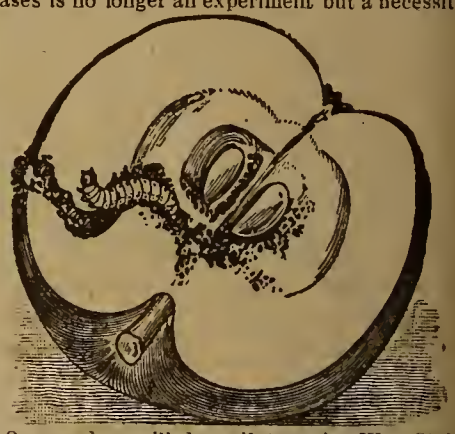

Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contain much valuable information, and may be had for the asking.

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and gas or dust and dirt. The Pullman Palace Car Company uses it by the car-load, because ample test shows it to be best for exterior and interior finish. The Kellogg Switch-Board Co. paints with it, because it lasts longer and holds its color better than any other paint, and they tried all of them. The Chicago Telephone Company and the Central Union Telephone Company use Carrara Paint on all their poles, because after rigid test not even the best white lead and pure oil can compare with it in lasting quality, clean, glossy appearance or low price per square foot of surface.

One of the monster mail-order houses of Chicago is painted with Carrara Paint, because it is best. Last year they ordered their building washed. Under the Chicago soot, gas and dirt of two years' accumulation was a coat of Carrara Paint that when washed glistened white and bright and fresh as when first put on. White lead would have corroded, mixed paints would have blistered and peeled off, Carrara was good as new, and so did not need repainting. From railroad box-car to elegantly furnished general offices; from race-track fences and stables to fancy club-house; from plain brick walls and stone fences to tin roofs or interior finish of stately hotels; from country barns or hay-shed or cheap outbuilding to farm residence, suburban home or luxurious city residence, Carrara is used because it lasts longer, never fades, never cracks, never blisters, never peels, covers more surface than the highest-priced paints, and costs less than the cheap mixed paints that injure instead of protect. Any one having a building to paint should send for 50 samples of colors, free, of this great paint that has stood the most rigid tests for years, and bear in mind that it is the only paint ever manufactured that is backed by a positive written guarantee to every purchaser. Write to-day, and save half your paint-bills in the future. There is but one Carrara. It is made by the Carrara Paint Agency, 294 Carrara Works, Barberton, Ohio.

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ELLWOOD STEEL WIRE FENCE
is low in price, high in quality. Heavily galvanized. If your dealer hasn't it write to
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Price $4.00 Sent freight prepaid anywhere east of Rocky Mountains on receipt of price.
Do in fifteen minutes that which usually takes two hours, by using our automatic perfectly built, promptly interchangeable
BOLENS MOWER KNIFE AND TOOL GRINDER
Tool Grinding Attachment with every machine. Send for illustrated circular.
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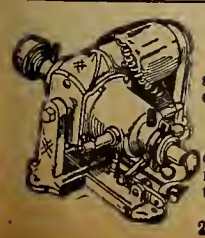

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Can be attached to any engine, new or old. Write for descriptive catalogue.
Motsinger Device Co.
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Where the Fruit-trees Come From

[CONTINUED FROM PAGE 1]

tied in bunches, labeled, and prepared for shipment.

A more modern form of grafting is "budding," the scion consisting of only a single wood-bud inserted under the bark of the stock. It is a far more rapid method—a skilled man, with a boy to "tie," being able to bud two thousand trees a day—and it is safer, because a second attempt may be made if the first fails. After a winter in the storage-cellar the seedling stock is planted out in nursery rows in early spring. In July or August the budding-gang of men and attendant boys go through the field, the men deftly making an incision in the stock's bark, slicing off a bud, inserting and passing on. The boys follow and tie the wound up with a temporary bandage of raffia.

Division of labor, brought about by both civilization and Nature, separates the business into the growing of fruit-trees and the raising of ornamentals. Differences of soil and climate carry the division still farther, and most growers make a specialty of certain species or even certain varieties. Three fourths of the pear-trees shipped out of Ohio come from New York, the roots or stocks originally being brought across the sea from France. In addition to what has already been mentioned, our quinces are grown mostly from European seeds, and apricots and nectarines, being budded on peach or plum stocks, are largely dependent on Tennessee and France for their root-parts. But every nursery buys, sells and trades with other nurseries, so that at "packing season" each can fill all demands.

Visit a typical nursery at packing-time—the middle of October or of April. In the background stretch hundreds of acres of tiny fruit-trees, broken by small forests of ornamentals and orchards of bearing trees for "standards," from which are taken the scions and "bud-sticks." There are fields and patches of many kinds of trees, shrubs and plants of various ages and under different methods of cultivation. Close at hand are cold-beds two hundred yards long; houses of wire and lath, erected to keep half shaded the ground within; sheds and barns that are nearly all cellar, with soft-dirt floor and thick walls; a string of box-cars on a private switch; long rows of whitewashed packing-sheds; large, impenetrable forests of bare trees and bushes tied in tight bunches, with roots "heeled in" in loose earth—thousands and thousands of trees in a bed. Last year this one nursery shipped out over a million trees. Everywhere is hurry and seeming confusion, yet with it all the most rigid system. Past the stacks of excelsior, straw, cranberry-swamp moss and rough sacking, around that heap of queer-looking raffia from Madagascar, hurry frantic boys, arms filled with mysterious burdens. Those men dodging behind a pile of huge coffin-like boxes to avoid a scurrying truck are fruit-tree agents coming from the office, each one anxious to see to the correct filling of his own complicated orders.

On his return from a house-to-house canvass the agent must be responsible for every delivery. For two or three weeks he and those under him work like beavers from early morning until long after the incandescent lights have begun to burn along the packing-sheds. Every order is itemized and numbered, and corresponding to each number is a shipping-tag, and for each item of each order a wooden tag with the name of the variety ready to be wired on the right trees. The agent takes his stand before his packing-shed. In front is the solid forest of "heeled-in" trees gathered and classified by species and varieties. Behind him is another shed for final wrapping, and behind that freight-cars. "Four Baldwin, fifteen peach, three mountain-ash, six prunes." A man dives into the forest, and with each return throws down a bunch of trees, calling them as he does so. Two or three boys tie each bunch, one man attaches the name-tag, and another checks off and affixes the correct shipping-tag to the whole order. Back it goes through a series of "wrappers," and emerges with the bodies of the trees straw-covered and tied firmly together, with the roots packed in damp moss or excelsior and wrapped in coarse sacking ready for the journey. Meanwhile the agent has started several dozen other orders. No other mortal knows how he "keeps things straight," but he does. The larger orders for heavy buyers are packed solid in box-cars or in wet moss and excelsior in those big boxes.

And so from seed to consumer. Perhaps we have seen them bill out to you those very trees you ordered several months ago from "some man that came to the door." Perhaps not. At least we know the story—a story that runs centuries back through history.

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BECAUSE.—They are constructed after the "Alpha" Disc and "Split Wing" patents, which cannot be used by any other manufacturer, and which enable De Laval machines to skim cleaner and produce a more even and more thoroughly churnable cream than is otherwise possible, at much less speed and wear, and much greater ease of operation.

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A De Laval catalogue explaining in detail the facts here set forth may be had for the asking.

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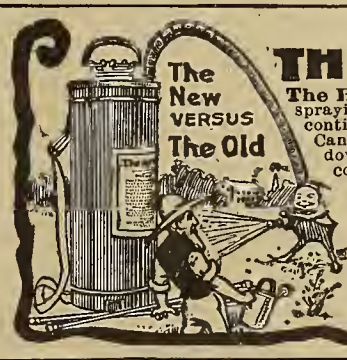

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The Marie Strawberry will bear as many bushels as the old Cresent, and is as large as the Cumberland. The ideal strawberry. The berry is good shape, dark crimson in color, flesh dark, and quality first-class. Makes plenty of good runners, free from disease. Catalog of everything for the orchard and garden mailed free.
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$26.50 BUYS A BUGGY
(with top $33.50) of very superior QUALITY, STYLE and DURABILITY. Entire output of two enormous factories, sold direct to consumer. We mfr. full line Buggies, Carriages, Harness, guarantee all goods, ship on approval.
WE DEFY COMPETITION and SAVE DEALERS' PROFIT.
Money back if not satisfied. Send for CATALOGUE and SPECIAL OFFER.
UNION BUGGY COMPANY, 206 Saginaw Street, Pontiac, Mich.

Notes From Garden and Field

About Asparagus.—With a good many vegetables, as well as with fruits, quality is a great consideration. In regard to asparagus, however, I have always placed quantity above quality. The flavor of asparagus is so delicious that the dish is pleasing to me without regard to variety or the color of the stalks. I can eat with equal delight, when properly prepared by a good cook, the green, the white and the red stalks, from above or below ground, and whether just boiled in salt-water and served with drawn butter, or boiled, rolled in cracker-crumbs and then fried in butter, boiled and served with oil and vinegar as a cold salad, or in a number of other ways. A few stalks boiled in a meat-soup greatly improve the flavor. For all these reasons I have no notion to quarrel with anybody who prefers the green stalks from above-ground, while I grow mine mostly underground, and slightly prefer them blanched. You may eat yours grown and prepared in your way, and I shall enjoy the privilege of growing and cooking mine in my way; and if I should visit at your home I think I would not refuse a good mess of asparagus prepared your way, nor do I fear that you, on a visit at my house, would refuse asparagus as I have it. In short, there are probably very few people who would not readily learn how to eat and enjoy asparagus prepared in some way. The next great advantage that asparagus has over other vegetables is the fact that a bed once planted will, with proper care, supply a family for a generation. Another, that a small patch, say a rod square, will give a full supply for a family every day during its season, which here lasts from April through May and up to the middle of June. During this whole period it largely takes the place of meat at noon meals. There is always a ready demand for any surplus there may be.

Quite frequently in recent years I have been asked to mention a good work on asparagus culture. A special treatise of this kind, however, was not in existence until my good friend Dr. F. M. Hexamer wrote and compiled his "Asparagus—Its Culture for Home Use and for Market." This book was published by Orange Judd Co., New York, and is a very serviceable and complete work on the subject. Years ago the varietal differences between so-called different varieties seemed to be so slight that I used to believe in the existence of only one distinct variety, and ascribed the reasons for the variations in size and even color to differing soil and cultural conditions. But I confess that at present I can see very marked differences, and believe these differences have become intensified in recent years. They manifest themselves in various ways in all the sorts of more recent introduction. Doctor Hexamer names eight American varieties—namely, Barr's Mammoth, Conover's Colossal, Columbian Mammoth White, Donald's Elmira, Eclipse, Hub, Moore's Crossbred and Palmetto. Mammoth should be eliminated from the list for reasons mentioned by him; namely, that it is an indefinite term, and may mean Barr's Mammoth, Columbian Mammoth White, or some good strain of any other which some enterprising seedsman has introduced with his own name prefixed. The one variety not mentioned by Doctor Hexamer is "Quality," introduced last year by Mr. Burbank, of California, under claims for a marked improvement in quality. I have a few dozen plants growing, and will say that if his claims are well founded (and Mr. Burbank is not in the habit of talking idly) the new asparagus must be a phenomenon of deliciousness.

What Next to Plant.—We seldom have much chance in western New York to do any outdoor planting in March, and in some seasons, like the last one (1901), our patience is severely taxed even in April. It was then only a week or so before May that we could get the soil in cultivation to sow a miscellaneous lot of garden-seeds in open ground. Our operations during March are mostly confined to the greenhouse and to hotbeds or cold-frames. It is safe to say that comparatively few of our readers have greenhouse privileges and the free enjoyment of winter and early spring forced vegetables. But any one can do pretty well with an early hotbed, or even an early cold-frame, made in a sunny, well-protected spot, as in the northwest corner of a board fence or on the south side of a barn or other building. A few nice heads of lettuce, a few radishes, a bit of cress, etc., are very easily grown in a hotbed or frame, and they will greatly add to the enjoyment of your meals in early spring. With a five-cent packet of common cresses you may sow a little spot at one end, broadcast, and within a very few weeks' time you will have a chance to make repeated cuttings of the pungent foliage for salad, to be eaten alone or mixed with lettuce. I prefer the combination, which to my taste is very palatable. Repeated sowings of cresses may be made in this way to have a continuous supply for several weeks and until the outdoor garden vegetables are ready for use. No other vegetable is known to me which would give a supply of something green in the short space of time that we accomplish the task with cresses. The next thing is lettuce. For an early frame variety I know of nothing better, more reliable and more easily grown than Grand Rapids among the leaf sorts, or some good strain of Tennisball (some seedman's "Forcing or Hothouse" lettuce) among the early heading varieties. A good way is to sow the seed in rows, say three to four inches apart, and thin the plants to three or four inches apart in the rows. Then when the plants get to crowding, cut out every other row for the table (to eat with cresses, as before mentioned), and thin every other plant in the remaining rows. Then you will have a bed of lettuce with plants standing from six to eight inches apart each way, which gives just room enough for the development of nice large heads. We will also want a few good plants to set into open ground as soon as the garden-plot is ready in early spring. Tennisball or any of its strains (Boston Market, Big Boston, Early Prizehead, etc.) are what we will want for this. The plants may be grown in rows across the hotbed or frame, allowing plenty of room, say not less than three inches each way for each plant, then taken up with some soil adhering to the roots, and carefully planted out in the richest and warmest spot outdoors.

The next thing to plant is radishes. People who have never grown them in an early hotbed or frame, filled with sandy loam or sand, or in a greenhouse can have no idea how nice and crisp and sweet it is possible for a radish to be. I seldom grow any other variety now, except the short turnip-rooted ones—namely, Nonplus Ultra, Extra Early, Scarlet Forcing, Rosy Gem, White Box, etc. T. Greiner.

Orchard and Small Fruits

CONDUCTED BY SAMUEL B. GREEN

Treatment for San Jose Scale

Fumigation with hydrocyanic-acid gas is not to be recommended for general use by individual orchardists. The fumes are very dangerous—a deadly poison—and no risk should be taken by parties unfamiliar with the best methods of handling it. The operations are very expensive, except when carried on extensively with an equipment of gas-tight tents. Combating the scale by this method is impractical for large trees. The chief objections to its use are (1) the great danger; (2) too great expense for individual orchardists; (3) suited only to trees of limited size—about ten feet or less in height.

"Kerosene and water." Pure kerosene oil, if properly applied, may be used on apple-trees in the winter without great danger to the trees. A spray composed of forty per cent of kerosene and sixty per cent of water is practically as destructive to the insects as the pure kerosene, and may be used on apple and pear trees in winter without danger. This mixture is applied with any good mechanical-mixture pump. Lower percentages of kerosene are not recommended for destroying adult scale-insects in winter.

"Whale-oil soap" is very destructive to mature scale-insects when used at the rate of two pounds of soap to one gallon of water. This may be applied to any infested trees in winter with an ordinary spray-outfit. For winter use on tender trees, as the peach, two pounds of soap to three gallons of water is advised. For use on trees when in full leaf a strength of one pound of soap to five gallons of water can be safely used, and is sufficient to kill only the young insects, which are most abundant in summer. Whale-oil soap is not so convenient as the crude oils, and is more expensive for orchard-spraying. It is, however, very advisable to use it when only a few trees are infested and a kerowater-pump is not in the neighborhood.—Bulletin No. 78, West Virginia Experiment Station.

Inquiries Answered

Planting an Orchard.—J. M. L., Archie, Mo. A north slope is the best aspect for an orchard. If the soil is poor, horse-manure will be good to put on the land, but do not put it around the trees until after they have started. The apple-trees in your section should be put about thirty-five feet apart. I do not think a wind-break is needed in your section, but if the location is very much exposed, so that the fruit will be liable to blow off, I should put Osage orange or some similar plant for a wind-break. As a rule apple orchards do best where they have a free circulation of air, and in good orchard sections it is not desirable to put up wind-breaks, as free circulation helps to prevent injuries from fungi and insects.

Pruning Pear-trees.—M. F., Caro, Mich. Pear-trees of different kinds have different habits. For instance, the Bartlett is an upright grower, and the Winter Nelis is a very spreading grower. Such trees require different attention. Pruning in either case, however, should be done to keep the trees in good form, to keep the branches from growing so close to the ground as to interfere with cultivation, and from spreading so much that they are liable to break off when loaded with fruit, and from interlocking. After a pear-tree begins to bear heavily it is seldom that any pruning is needed. When it is in the formative period, however, it will often form strong, vigorous shoots, which if left to themselves will become too long. These should be shortened back about one third of their length.

Spraying Plum-trees—Borers.—J. F. W. York, Pa. The foliage of plum-trees is quite sensitive to injury from Bordeaux mixture, and while sometimes the full-strength formula—that is, one made up of five pounds of fresh lime, five pounds of sulphate of copper and fifty gallons of water—may sometimes be used without serious injury when the cherries or plums are half grown, at other times it will cause injury, and I am inclined to think that about half this strength would be much safer and accomplish nearly as good results.——The apple-tree borer generally makes a crooked burrow and one that is rather difficult to follow with a wire, but still most of them can be reached and destroyed in their burrows by using a piece of soft wire that will easily adapt itself to the turns in the holes. I would not cut the trees very severely in taking out borers. The best material to squirt into the holes where you cannot reach the borers by wire or easily dig them out is bisulphid of carbon. This is a material which resembles gasolene in many ways, and is fully as combustible. A good way to use it is to put it into an oil-dropper, force it into the holes and then stop up the holes with putty or grafting-wax. The vapor from the bisulphid of carbon is what kills the borers, and if thoroughly applied it will relieve you entirely of their presence without hurting the tree. Strong lye would undoubtedly accomplish much the same purpose if you could get it into the holes and keep it there, but it is rather mean stuff to handle for such a purpose. Kerosene would be better than lye, since even a drop of the kerosene on the body of one of these insects is enough to destroy it, as it spreads over the body and covers up the pores through which they breathe, and suffocates them.

Pruning Fruit-trees—Removing Outer Bark.—P. M. S., Coveforge, Pa. It will be quite out of the question to give you very minute directions in these columns as to the proper time and method of pruning fruit-trees, for the subject is too big. If you will specify what fruit-trees you refer to I will try to answer you in a future issue. In a general way, however, pruning of older wood should be done at some time other than in the spring, just as the tree starts into growth, as this is the time when wounds are most liable to make permanent injury, but pruning of the new growth may be done at any time without danger of serious injury. Where only a small amount of wood is to be removed I prefer to prune from the first to the middle of June. Where a large amount of wood is to be removed I prefer to do it late in the autumn, or very early in spring before the sap starts. All wounds over three fourths of an inch in diameter should be covered with grafting-wax or a very heavy coat of whitewash. If the trees are properly attended to from the time they are started there is no need of ever doing heavy pruning. In fact, were trees looked after most carefully all the pruning that would be necessary for most trees could be done with the finger-nail. In the case of apples I think many orchards are injured by too much pruning, and that it is well to avoid all pruning except such as is done to remove awkward or interfering branches, and to keep the trees in good shape. The same is also true in the case of pears; but where pear-trees make a very strong upward growth in the center of the tree, as they will often do on rich land, it is a good plan to shorten this growth about one third its length in the autumn or early spring. In the case of peaches from one third to one half of the new growth should be pruned off every spring. This is done to thin the fruit and also to keep the tree in good shape. If neglected, the trees are apt to have too long branches, and then to break down when they have a heavy crop.——Where trees have been injured, and the outer bark has become very rough, as is often the case in old orchards, it is a good plan to remove this outer bark in connection with the other renovating methods employed, and scraping away this bark will expose some cocoons and eggs and a number of insects. This certainly does no harm, and may do some good, although I am somewhat doubtful about its being so very beneficial. Where moss forms on the trunks of trees it is generally due to the absence of a good circulation of air, but the moss may be removed entirely by spraying the trees with Bordeaux mixture, or even covering them with whitewash.

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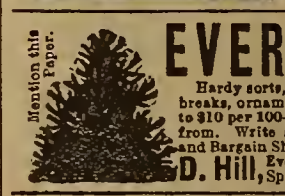

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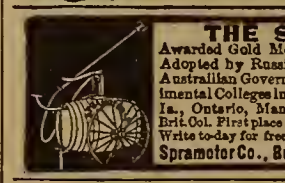

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THE POULTRY YARD

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Poultry-houses and Barn-yards

THE poultry-house should be separate and apart from other buildings where farm-animals are kept. Fowls need treatment which they cannot get when allowed to run and roost with other stock; and, besides, their uncleanly habits make them unfit companions for live stock, and it is disagreeable to have them roosting about the barn. They take on vermin more readily than any other creatures, and when allowed to roost in the sheds or stables are almost sure to cause lice on the cattle and horses. Kept in a house of their own these evils are avoided, and the fowls themselves can be kept in a much better condition. Fowls should never be allowed to roost in the stables. Although the hens will lay in the troughs and racks, yet they do more damage to the hay than the eggs can repay. Not only do they foul the stalls and floors, but are noisy and disagreeable to the animals, to say nothing of the fact that they can transfer lice from their bodies to every portion of the stables, which become hard to eradicate and entail much labor and annoyance. Have the poultry-house dry and warm. In making a tarred-paper roof on the poultry-house it is better to fasten the paper with plastering-lath, as the tins made for the purpose of holding the paper in place often cut into it and allow it to be ripped up by hard winds. If a coat of coal-tar be applied every six months the roof will soon become hard like tin and shed water completely.

Hamburgs

Hamburgs are among the most beautiful of the breeds. The Hamburgs are more popular in England than in America, and as a natural consequence they are found much nearer perfection there than here. All the varieties possess so many characteristics in common that the best authorities agree that originally they all sprung from a common stock. All the varieties are commonly designated as non-sitters. They are active and need free range, being comparatively of little use when penned up. They seem to require at least a moderate range, and will require little food beside what they forage for themselves under favorable circumstances. They are great egg-producers, and under good management a single female has been known to produce in a year as many as two hundred eggs. It is not true, however, that they never desire to sit. The spangled variety is perhaps better known than the penciled, and breeders claim that they are hardier, but the golden are not so numerous as the other varieties. It is difficult, if not impossible, to judge what the markings of the adult fowl will be by the feathering of the chick until after its first molt. Indeed, it frequently happens that they do not show their finest plumage until after they have once or twice changed their feathers.

Geese for Market

Geese pay best when they have a good pasture and plenty of grass. In winter they prefer bulky food—such as scalded clover, cabbages, turnips, potatoes—with some ground grain. Old geese should be retained and the young ones marketed. The geese for breeding should be kept rather thin in flesh. Once started, a gosling is the easiest of all young birds to raise, and is seldom sick. A pair of Toulouse or Embden geese will turn off a considerable quantity of feathers in a year, which may more than balance their feed. The goose will lay from twenty to thirty eggs. The market price will usually give the farmer a handsome profit. A goose will only sit on a nest she is accustomed to lay in, and will not brook interference in any shape or form. She is very faithful, and the gander is ever watchful to attack any stranger who intrudes, and as he has great power and strength in his wings he can do severe injury.

Sitters and Chicks

Chickens when first hatched should not be hurried out of the sitting nest. For twenty-four hours at least from the time the earliest commence to show themselves it is better to leave them under, or with, the hen-mother. They need no food for a day or a day and a half, usually. When they get strong enough to venture from beneath their mother's wings it is time to move the brood.

Egg-eating Hens

Egg-eating hens are found everywhere and in nearly all flocks. Hens learn to eat eggs, which usually happens by an egg becoming broken; and the hens once having discovered that the eggs make a rich, nutritious food, will prefer them. It is also sometimes due to lack of meat or of some nitrogenous food, as the drain upon the system by the production of eggs demands that the hens be provided with that which is absolutely necessary. Placing the nests in a dark place, with only light enough for the hens to see to go upon the nests, and with the nests also rather high up from the floor, serves as a partial preventive. If the hens are deprived of the privilege of eating eggs for awhile they soon forget the vice. It is best to avoid breaking eggs or throwing the shells in reach of the hens, so as to prevent the habit as much as possible. The nests should also have tops, so as to compel the hens to walk into the boxes instead of alighting on the nests.

Feeding the Grains

So long as wheat and corn are produced on farms these grains will be used by farmers as the chief foods for poultry; and both wheat and corn are cheapest where grown, as no transportation charges enter into the cost. During the spring and summer there is less desire and demand for grain than in winter, and in feeding the fowls advantage should be taken of the cheaper foods. Wheat fed whole to laying fowls, and wheat screenings or cracked wheat fed to young chicks, have always produced the most desirable results, though it must be remembered that they must not be fed to the exclusion of other foods.

Clean Nests

The hens prefer clean nests, and when they refuse to lay in the poultry-house, and begin to deposit their eggs in the hay-loft, in the food-troughs, or away in the fields, the chances are that lice have taken possession of the nests and driven the hens away. A single broken egg in the nest will soon cause millions of lice, and once they secure a foothold they stick closely until they are driven off by heroic treatment. Keep the nests clean, and always have tobacco-dust, or earth saturated with carbolic acid, convenient for scattering in the nests when cleaning them.

Wire Fences

The form and height of the fence inclosing the poultry-yard should be according to the variety kept. A fence for a lot of active Leghorns would be worthless if built five feet high, such as one would use for the Cochins or Brahmas. Wire netting stretched neatly from posts eight or ten feet apart, to the height of about ten feet, will usually meet all requirements.

Inquiries Answered

Soft-shell Eggs.—L. B. L., Moundsville, W. Va., writes: "What is the cause of my fowls laying eggs with soft shells?"

REPLY:—The fowls are not in good condition, and are probably excessively fat.

Alfalfa.—H. F. S., Panville, Indiana., writes: "Will alfalfa prove as good for poultry as clover, giving the same results?"

REPLY:—Any of the legumes will be relished by poultry, though the fowls may show a preference for some kinds. Alfalfa has given excellent results with poultry.

Cotton-seed Meal.—B. L. H., Loneoak, Texas, writes: "Is cotton-seed meal suitable food for poultry?"

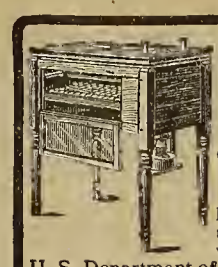
REPLY:—If fed moderately, about a teaspoonful for each hen every alternate day with ground grain, it will be found serviceable, but linseed-meal should be given the preference.

Asiatic Breeds.—M. G. L., Sterling, Ill., writes: "Please mention the breeds known as 'Asiatic.'"

REPLY:—The Asiatics comprise the Brahmas (Light and Dark), Langshans and Cochins. There are several varieties of Cochins, differing in color only, such as White, Black, Buff and Partridge. All the Asiatics are large and have feathered legs.

Young Rye.—E. S., Atglen, Pa., writes: "I have a field of rye on which I desire to allow my fowls to run. Will they require any other food?"

REPLY:—If the hens are turned on young rye too early or kept on it too long the watery rye will prove very laxative, and perhaps be harmful. Give other food, and begin with the rye gradually.



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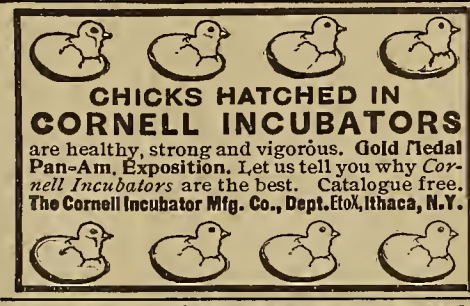

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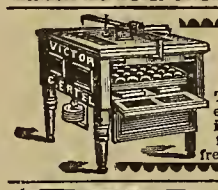

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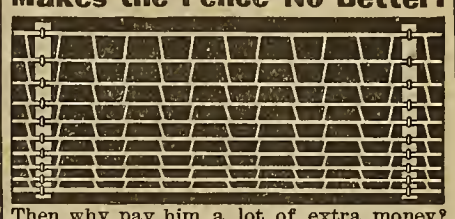

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VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

So-called Ringworm.—F. J. K., Parnell, Mich. Please consult the FARM AND FIRESIDE of January 15th.

Warts.—A. H. N., Littleton, N. C. Please consult the FARM AND FIRESIDE of June 1, 1901, in which number you will find a full account of the treatment of warts.

Garget.—L. C., Eudora, Kan. What you describe is a case of garget. More frequent and more thorough milking, thus removing all the clots, constitutes the remedy.

Yields Only a Few Spoonfuls of Milk at Each Milking.—W. R. K., Grafton, W. Va. Since your cow, due to calve last November, had a dead calf taken from her not before January 18th, the time of bringing her to milk undoubtedly had passed, and it is not probable that you will succeed in inducing a satisfactory flow of milk until she has another calf. I have no doubt that you would have succeeded if the calf had been taken away from her at the proper time.

Were Sick Three Weeks, and Then Died.—V. G. T., Winterpock, Va. Your description, so far as it goes, points to some lung-disease, which possibly may have been tuberculosis. If it was, your two cows unquestionably have been ailing much longer than three weeks, although it may be that the symptoms were not sufficiently conspicuous to attract your attention. A post-mortem examination would have settled the question. The swelling (probably doughy or edematous) beneath the lower jaw was a symptom of dropsical effusions in one or both of the large cavities, most likely in the chest.

Slimy (?) Milk.—F. B. M., Bethel, Vt. What you call slimy milk is probably nothing more nor less than a case of chronic garget. If such is the case—and the good condition and the good health of your young cow, combined with the gradual decrease in the yield of milk, indicate it—more frequent and more thorough milking constitute the remedy. If, however, the milk when drawn from the cow is perfectly normal and does not become "slimy" until it has been standing for some time, the cause or causes are outside of the cow, and must be searched for somewhere else—perhaps where the milk is kept—and then the decrease in the yield of milk has another cause and has nothing to do with the later development of the "slimy" condition.

Milk-fistula.—F. M. S., Stony Man, Va. You cannot effect a cure or cause a permanent closing of the milk-fistula so long as your cow is yielding milk, but as soon as she is dry have a veterinarian refresh by means of the surgical knife the borders of the opening through which the milk is escaping, and then unite them by means of an aseptic suture in such a way that a healing by first intention (without any suppuration) will be effected. If the opening is very small it may be sufficient to effect a permanent healing to cauterize the borders of the opening by introducing into the same a stick of lunar caustic (nitrate of silver), but of course not any deeper than the thickness of the skin and the connective tissue immediately beneath, and leave it in contact with the borders of the opening say from ten to fifteen seconds, or just long enough to refresh the borders and to cause enough swelling to close the opening. The caustic under no circumstances must be pushed into the interior of the teat.

Blackleg.—S. H., Mosquite, Oreg. There is no doubt that your young cattle died of so-called blackleg—an almost invariably fatal disease. That your vaccination proved to be ineffective may have been due to one or more possible causes—your animals may already have been infected when you applied it; the material used may have been too old; it may not have been good from the beginning, and you may have made a mistake in its application. If you wish to get blackleg vaccine from the United States Department of Agriculture, you may be able to get it, with instructions how it is to be used, if you address Dr. D. E. Salmon, Chief of Animal Industry, Washington, D. C. It can also be obtained from private parties—for instance, from the Pasteur Institutes in Chicago and New York, from Parke, Davis & Co. in Detroit, and probably from others. Formerly most excellent and reliable blackleg vaccine was sent out by the Kansas State Agricultural College, Manhattan, Kan., but the scientist who made it is not there now.

Probably Tuberculosis — Heaves.—T. N., Lexington, Okla. Your sick cow probably suffers from tuberculosis. Have a post-mortem examination made when she dies, and if the result of the post-mortem examination verifies the presence of tuberculosis have all your other cattle either examined by a competent veterinarian or subjected to the tuberculin test to enable you to weed out every tuberculous animal you may have in your herd, because tuberculosis is not only a very infectious, but also, practically at least, an incurable, very insidious and finally fatal disease.——Heaves of horses is a term applied to any chronic, feverless and incurable difficulty of breathing, no matter what the original causes may be or may have been, and therefore does not signify any definite or specific disease. As already said, a cure is out of the question. An improvement can, in most cases at least, be effected by a judicious dietetic treatment, but it will last only as long as the latter is kept up. Please consult the numerous answers given under the caption of "Heaves" in recent numbers of the FARM AND FIRESIDE.

Lame.—J. H., Marion, Ind. You say of your horse, "He is lame in his right fore foot; is not so lame when he walks as when trotting; when he is driven and left standing awhile gets very lame, can scarcely trot; we can't notice the least thing on his foot or leg; one time we thought he flinched when we pressed on his foot just above the hoof." Later on you say, "We can't tell where the lameness is, whether it is in his foot or leg." This is all the description you give concerning the lameness, while everything else you say has no bearing upon the case. The description, therefore, is very meager and indefinite, and the only statement of any diagnostic value is that the lameness shows a marked increase when the horse has been standing awhile after he has been driven, and that you cannot notice anything (swelling and other signs of inflammation, I suppose) on foot or leg. But even these peculiarities, being common to more than one kind of lameness, are insufficient to base upon them a definite diagnosis; therefore I have to advise you to have your horse examined by a veterinarian. As the peculiarities mentioned are often observed in ringbone and in navicular disease you may possibly be able to arrive at a diagnosis if you follow the advice given in the FARM AND FIRESIDE of December 1, 1900, and November 1, 1901.

Foamy Milk Refusing to Yield Butter.—J. P. A., McCune, Kan. What you complain of may possibly be due to a defective diet, as it is claimed that certain kinds of food, especially if spoiled and innutritious when fed to the cows, may have such an effect, but in the vast majority of cases the real cause will be found to consist in an invasion of certain bacteria into the milk. This either takes place in the stable while the milk is exposed in the pail, or in the place in which the milk is kept afterward. If it is known where the infection occurs it will be sufficient to thoroughly clean and disinfect that place. If it is not known it will be advisable not only to clean and to disinfect the stable and the premises and milk-vessels in which the milk is kept, but also to wash the udders of the cows before each milking, and to do the milking only with perfectly clean and dry hands. It is further claimed that the temperature of the premises in which the milk is kept may have something to do with it, but it is far more likely, especially as most of these cases occur in the winter or in cold weather, that poor ventilation or foul and contaminated air is at fault. It is also more or less difficult to get butter if the cows are too old milking or too near calving. To find the real cause in a given case requires very often a most thorough and searching investigation. If the cows, in consequence of having been fed with too much spoiled and innutritious food, should suffer from chronic indigestion, half an ounce of muriatic acid, given twice a day for a few successive days with the water for drinking, has often a good effect.

Contracted Tendons.—C. S. C., Coveforge, Pa. The crippled condition of your mule, which walks on the toe-parts of the hoof, is no doubt caused by a morbid contraction of the flexor tendons. After all symptoms of inflammation in the contracted tendons have disappeared considerable improvement, and in some cases a condition approaching normal, can be produced by a properly performed surgical operation, consisting in subcutaneously cutting the contracted tendons, then keeping the operated leg properly handaged until a perfect healing has been effected—namely, about eight weeks, or longer if the animal is an old one. As only one leg can be operated on at a time, and the second one not before the tendons of the leg first operated upon are again fully strong enough to support the weight of the animal, and as the tendons of the second leg will require the same length of time to regain an approximately normal condition and sufficient strength to support the weight of the animal, it will take from five to six months or even longer until the animal will be able to do light work. The performance of the operations requires a competent veterinarian, who of course will be available in your state. I make these statements to enable you to make an estimate of the cost of the treatment and of the keeping of the animal, and thus to decide for yourself whether it will be preferable to kill the animal or to subject the same to the necessary treatment and to feed the same for at least half a year without any returns in the shape of work, and probably several months more before any hard work can be done by the animal. If only one leg were affected the case would be more favorable. Further, success can be expected only if no mistake is made in either the operations or in the subsequent treatment.

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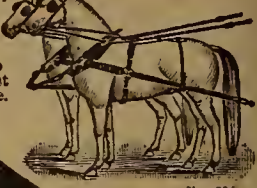
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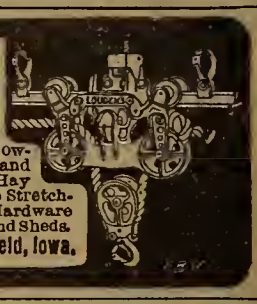

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Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged.—Dr. Manasseh Cutler.

Current Comment

Arbor-day When Hon. J. Sterling Morton, Ex-Secretary of Agriculture, proposed that a day be set aside for planting trees, he probably little dreamed of the momentous results that would follow. From its first official recognition by Nebraska, in 1872, where the beginnings were modest, indeed, the enterprise has followed much the same lines as have others of a public nature. It has had its ups and downs, its periods of rapid development and of sluggish indifference. Its wisdom, however, was so apparent that now nearly all of the states of the Union give official recognition to Arbor-day. Obviously the date must differ in different sections. It often occurs, however, that the day officially designated as one fit for tree-planting does not suit all localities of the state. In those instances common sense dictates that trees be planted at a time most fitting, when soil and atmospheric conditions are most favorable. If desired, public exercises may be held on Arbor-day. Often it is a means of arousing public sentiment.

Plant a Tree There is far more prudence in the plan of the shrewd Yankee who planted a tree at odd moments, that it might grow while he slept, than appears on the surface. This sagacious observer foresaw that when he planted a tree he also planted in the hearts of his children and his countrymen the roots of love and affection for his home and community, as well as a deep and abiding patriotism. Every tree that grows and flourishes in a community has its root in the heart of some man or woman. Some one loves it. Some one in the days that are to come will think of it with feelings of love and reverence for the hours spent in its shadow. Emerson once said that the reason the Englishman was so patriotic was because of the grand old trees and the ivy-mantled walls and towers of his native place. Look back over your own life and see how your affections center about some beloved tree or plant.

Tree-planting on Rural School-grounds Tree-planting on rural school-grounds has received quite an impetus in recent years. We are learning to educate the eye and to cultivate the esthetic taste. We have found that he who does not love beautiful things is a poor makeshift of a citizen, and rarely does anything for the bettering of his community. As the school is the training-ground of Young America, we desire that it shall be beautiful and artistic, that the students may grow into strong, helpful, beauty-loving men and women, with the observant and artistic faculties developed. Consequently we plant trees, not in straight rows, unless compelled to do so, but in clumps. They are used to shelter the school-house and protect it from the wintry blasts and summer's heat. Among them the children are learning Nature's secrets, her processes of birth, growth and decay. It is useless to argue the advantages, because they are apparent to all. We call attention to it, because we know you have all along planned to make a start this year, and we don't want you to overload yourselves with work, so that you cannot find time for this.

And in planting why not put out a few apples, cherries, plums and peaches? Children love fruit. They thrive on it. Clearer brains would result from its abundant use. It is a mistaken notion, and one that every healthy lad and lass resents, that the children would destroy the fruit. On the contrary, they would zealously guard it. It is their property, and woe to him who tramples on the rights of the American youth. Besides the food value practical lessons in horticulture, under the tutelage of a competent teacher, would be learned. Plant grapes, not one or two, but wherever a place can be found. Plant them to train over the coal-house, to hide unsightly posts and fences, even to clamber over the school-building itself in a suitable situation. Set a few currant and gooseberry bushes. While they do best with cultivation, yet we all know the great crops of luscious currants gathered along the old garden fence. Let the little ones have these fruits in abundance, and we will hear less of the aching heads, the smarting eyes and the keen pains to which a growing child is heir. Let him learn the value of fruit as food, and abnormal will be the one who does not, when he owns a home, have fruit in abundance. It will create in him a desire to have a little home of his own, where he can have that which he craves.

To be successful it is best, if the teacher does not know the art of transplanting, to ask a successful farmer to give explicit directions, and to be on hand on the day of planting. Usually it is best to secure native trees, vines and plants that have proven themselves hardy and easily acclimated. Then exercise great care in transplanting, remembering that there will be two months of drought to resist. The irrigation, save in rare instances, must be done by cultivation before the trees and plants are set.

Grange in New Mexico A. D. M., of New Mexico, writes: "I used to be a member of the grange in Iowa twenty-five years ago. Since then, I am sorry to say, many granges have become dormant, but my faith in the organization has never lessened. I believe with a little agitation it will spread like wild-fire. In these days of trusts and combinations the farmer is compelled to organize as a protection to himself. I write you to ask what are the necessary steps to be taken toward organization. I am sure a large grange could be organized here."

The letter is greatly condensed. Through its entire length it breathed forth a love for, and a confidence in, the organization. It is a curious fact that members of the long ago who have moved away from the center of grange influence yearn to be again in line. If Brother M. lived in the central West or East he would see that the grange has already "spread like wild-fire."

To organize a grange it is necessary to have thirteen charter members, four of whom must be women. The minimum initiation fees for men are one dollar, for women fifty cents. The minimum dues are ten cents a month. It would be better to have at least twenty members, with a prospect of more. It is also best to make the initiation fees five dollars and three dollars respectively, as was the original plan. Write to the National Master, Hon. Aaron Jones, South Bend, Ind., telling him of the grange interest, how many will pledge themselves to go into the grange, and what the prospect for more granges is in your county. Write to Hon. N. J. Bachelder, Lecturer National Grange, Concord, N H., for grange literature. We earnestly hope Brother M. may succeed in his work.

Peach-trees and a Library As a practical example of the relation of fruit to education we cite the following instance: Several years ago, when wool fell to so low a price that the sheep-raising farmer dropped his head in shame, a shrewd student of Athens County, Ohio, soil urged the farmers to plant peach-trees on the hills formerly trod by the golden hoof. Later on the need of a school on Peach Ridge became apparent.

"'Tis useless to build here," said the farmers, "for the children will eat and destroy our choicest fruit."

The argument pro and con waxed hot, as such controversies have a habit of doing, and for a time it seemed probable that no school-house would be built; or, if built, to be put so far away from the orchards as to prevent the little marauders from appropriating the fruit.

Finally Mr. A. H. Simms came to the rescue. He offered to plant some of the choicest fruit, to which the children could have access, near the school-house. The proposition was accepted, the trees planted, and the children had all the fruit they needed. They were also careful that none should be wasted.

Mr. Simms picked and marketed the peaches. The two crops yielded twenty dollars. With that sum one hundred books were purchased as the foundation of a school library.

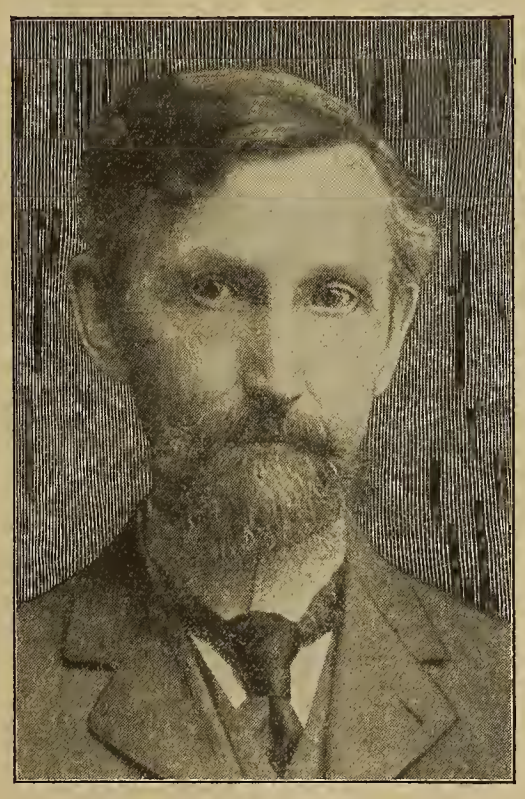
The wise forethought of this practical, generous farmer has brought untold blessings to that community. Hereafter the peaches that the children do not consume will go toward enlarging the library. No doubt the fruit will give the children keener brains for the use of the books. At any rate it is an example worthy of mention.

There is not a community in the United States but has some one who desires to better the condition of his fellow-men. All of us are imbued, more or less, with the missionary spirit. No doubt they have said to themselves, "I am ready to work, but I can do nothing."

Have you tried? As an economy of forces it is better to work through the natural desires than to try to cultivate new tastes. Gratify the tastes already formed, and new ones will follow as naturally as night follows the day.

Prof. Charles E. Thorne

"The first time I saw Professor Thorne," remarked an acquaintance, "was at a farmers' institute in a small country town. He entered the hall, and took his seat in a quiet, unobtrusive manner. But there was something in his attitude, his walk, the glance of his eye that told he was accustomed to deference. In that calm, gentle, dignified bearing lurked a power that thrilled me. I instinctively realized that here was a victorious man, one who had conquered circumstances and made them yield him a rich increase. It was the biography of a life that had been true to a purpose, and it showed itself in every gesture. When he spoke it was with that perfect composure of one who knows his subject thoroughly. There was no struggling after effects, no impertinent thrusting of the personality of the man over the theme, but his personality was thereby increased many fold. He held those who were naturally interested in his subject, of course, and from those who had heretofore shown no interest he compelled attention and inquiry by his own personality. They realized that here was a man of power—a strong man—who considered the subject of sufficient worth to delve deeply into it. To me it was one of the most fruitful hours of my life."

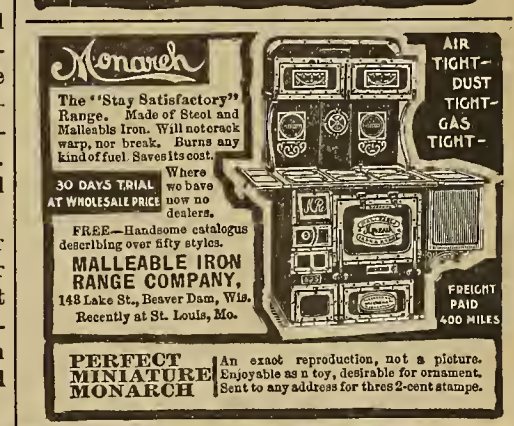


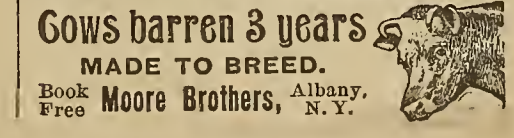
PROF. CHARLES E. THORNE

Professor Thorne has been director of the Ohio Experiment Station for nearly fifteen years. During that time he and his co-workers have conducted experiments and carried on investigations which have yielded vast wealth to the farmers.

The farmers of Ohio have complete confidence in him. They know that he makes no recommendations that are not backed by the results of a patient, exhaustive inquiry and test. He has essentially the scientific mind—that is, he does not formulate a theory and then choose circumstances and phenomena to verify it, but seeks at all times for truth, let it lead him where it may. Professor Thorne has kept the station very close to its legitimate work, that which will benefit the farmers in general more than all else—that of investigation, research and experiment. Fortunate, indeed, were the farmers of Ohio when a man with prudence, foresight, integrity and unwavering determination was called to the head of their station. It has made Ohio formidable as a rival, enviable as a state, where the money appropriated for investigation and experiment has been used for the original purpose. So stanch is the support of the farmers of Ohio for Professor Thorne that they view with disfavor any attempt to cripple his work, or to bring the station to a lower plane of usefulness.

—It is not the wealth we possess,
Nor the height to which we rise,
But the good we do,
That lives beyond the skies.
—The Pilgrim.





EASTER MILLINERY

BY E. HARRINGTON

Among early spring hats every woman will appreciate the smart floral models illustrated for the Easter display. Some are made entirely of foliage and flowers, and are worthy examples of the millinery art.

Very few flowers can be manufactured at home, but most flowers are cut and tinted in a stamping-machine that can only be seen in factories. There are few flower-factories in the United States, as the greater part of such trimming is imported from Europe.

The whole style of the hat depends upon the beauty of its outline and the arrangement of the materials from which it is made. There is a diversity in shapes and modes of trimming, and each individual type of wearer is seemingly provided for. The broad, low shapes continue to be popular, and with the brims curving in some original way becoming or extremely smart. The marquis shape is extremely attractive, since it is varied in every way to suit the face, and the latest productions are trimmed at the back with a spreading bow of velvet ribbon or soft satin or masses of flowers or foliage. The French sailor (short back), if heavily trimmed with velvet and flowers and velvet-edge fold, will be a popular spring wear for young misses. The gipsy sailor is also a popular shape. This is much larger than an ordinary sailor, has a low crown and a rolled brim, and a simple chiffon rosette at the side-front is sufficient trimming. To make a chiffon rosette, take lengthwise seven inches wide and one hundred and forty-eight inches long, lay the two raw edges together, and sheer with a half-inch stitch; draw to six inches; use a double thread, and make each stitch half an inch deep. Used chiffons and Liberty silks are made like new by the following process: Have a smooth surface; the polished dining-room table will do, as there is nothing in the process to scratch or deface it. Next get a sponge and a bowl of cold water (if ice-cold all the better), lay out the silk, and rub the water in with the sponge. When wetted turn the other side, and rub the sponge filled with water over it until every wrinkle is out and the table can be seen clearly through the goods; leave over night. When dry it will be stiff and like new goods without a pin-mark or wrinkle in it.

Another feature of the season is the extensive use of finely plaited tulle or chiffon; also taffeta for entire hats. Innumerable yards of this plaiting are disposed in successive rows over a stylish shape, and the brim-facing carries out the same idea. The rich simplicity of these creations will appeal to artistic tastes. The usual adornment is a chou, or rosette, of the fabric from which the hat is made, or masses of foliage or flowers arranged at the left side against the flaring brim. The little basket-hat will be a dainty novelty and becoming to most faces. It is a little flat hat, of straw or chiffon, with a curving brim and a low crown-wreath and overflowing with flowers. Sometimes they are covered with a filmy lace edge.

The dotted foulard scarf as a hat-trimming is becoming a bit wearisome, but the Persian-bordered kerchiefs are undeniably smart. A large silk handkerchief is tied around the high crown, the ends passing through the brim in front and tied in a large butterfly bow, the brim being turned back right off the face. With these hats, which are turned back from the forehead, the hair requires to be pulled well forward and turned back in a puff, only a stray curl or two appearing on the forehead. I must tell you in this article that all milliners will put a bandeau in a hat, however cheap the material. There are eight distinctive styles of bandeaux, all sensible as well as stylish inventions of French millinery wit. The hat with a bandeau feels more comfortable than one without. It stays firmly on the head when the other will blow and lop about. Bandeaux are cut from buckram or cardboard, and wired on the edge.

The half-moon bandeau for the back of the hat is a design that may be used for either side or back of the hat, and gives the stylish tilt so much desired.

A double-point back bandeau is used only at the back, and the trimming should be placed at each point at the side of the coil of hair.

A half-circle bandeau is used only for enlarging the crown. This pattern should be placed directly at the back, the upper edge secured to the crown.

A side bandeau is used only at the left side of the hat. It is well adapted for small shapes and turbans. It is particularly good for buckles, birds and large round bows.

A cache peigne (meaning to hide comb) may be placed at either side to hold the trimmings which hang below the brim of the hat.

A connected double cache peigne is a pattern that is always placed at the back of the hat, producing a downward tilt to the brim. It should be entirely covered with trimmings, and is most used with hats that turn np in the baek.

A dollar-design bandeau is placed on the inside of soft, straw crowns as a support for the trimming attached to it.

A circular bandeau is used for the tam-o'-shanter caps, loosely folded toques, soft-crown hats, and to raise hats on the head that are too large in the crown.

E. Harrington.

Crocheted Needle-case

Use coarse crochet-cotton, chain 12 and join in ring.

First row—24 d (donbles) in ring.

Second row—* 2 d in first d, 1 d in next *; repeat all around.

Third row—Same as second row.

Fourth row—* 2 d in first d, 1 d in each of next two d *; repeat from * all around.

Fifth row—Same as fourth row.

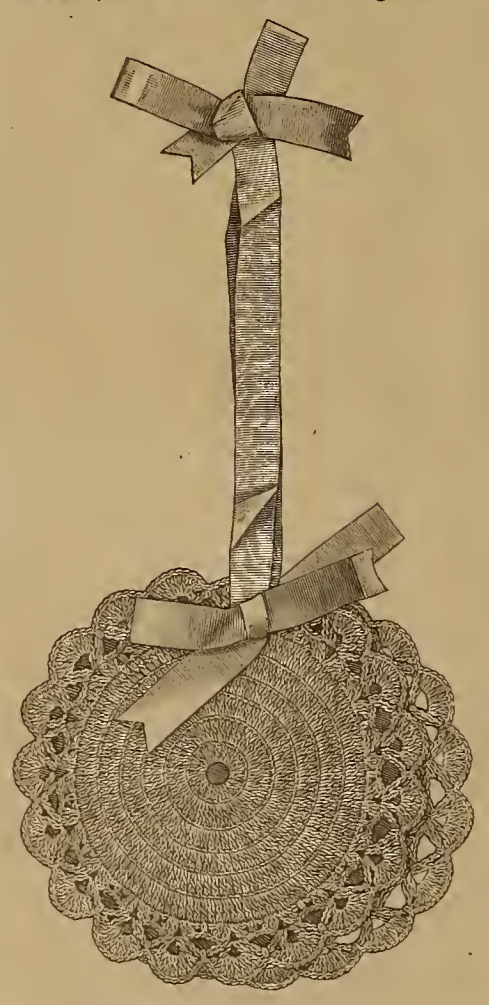
Sixth row—* 2 d in first d, 1 d in each of next 3 d *; repeat.

Seventh row—* Into third d put a shell of 2 d, 2 ch, 2 d, catch with single into third st from shell *; repeat.

Eighth row—Shell into each sh with 3 ch between.

Ninth row—Put 8 d into each sh and catch with single into each 3 ch between.

Make two of these circles. Tack them together with three pinked flannel circles between, and add bows and hanger of ribbon of contrasting color. Yellow with blue or Nile-green with pink are pretty combinations.



Joyce Cavendish.

Directions for Lace

Abbreviations.—Ch, chain; d c, double crochet; s c, single crochet; sq, squares; st, stitch; d ch, double chain.

First row—Ch 100, turn and make 7 sq, 2 st between each, 4 d c and 12 sq and 4 d c, 3 sq, 4 d c, 5 sq.

Second row—Turn, make 5 sq, 7 d c, 2 ch, 7 d c, 11 sq, 10 d c, 6 sq, 3 d c.

Third row—3 d c, 5 sq, 7 d c, 2 ch and 7 d c, 10 sq, 7 d c, 2 ch, 7 d c, 6 sq.

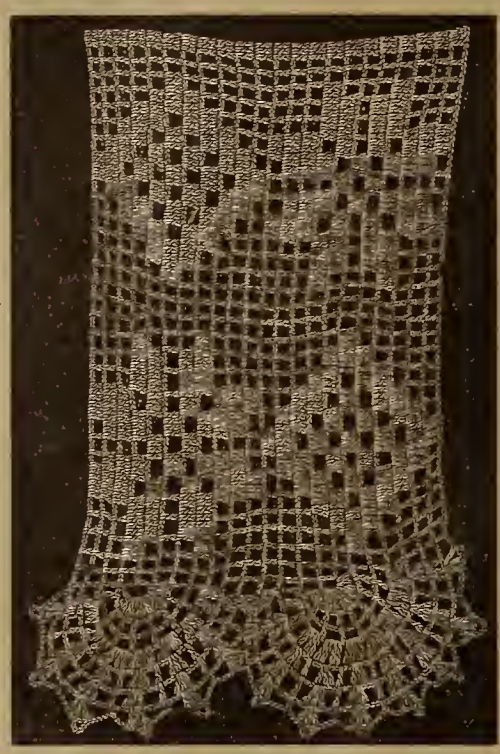
Fourth row—Turn, 2 sq, 10 d c, 2 ch, 4 d c, 2 ch, 4 d c, 2 ch, 10 d c, 6 sq, 7 d c, 2 ch, 4 d c, 2 ch, 4 d c, 2 ch, 7 d c, 4 sq, 3 d c.

Fifth row—3 d c, 3 sq, 7 d c, 2 ch, 4 d c, 2 ch, 4 d c, 7 d c, 5 sq, 10 d c, 4 d c, 2 ch, 4 d c, 6 sq. Make ch 5, fasten in fourth row for scallop.

Sixth row—Turn and make 15 d c in ch, make ch 5 and 7 sq in these st, and 6 sq, 4 d c, ch 2 and 4 d c, ch 2 and 7 sq, 7 d c, ch 2, 4 d c, 2 ch and 4 d c, ch 2 and 4 d ch, ch 2 and 7 d ch, 2 sq and 3 d c.

Seventh row—Turn, make 3 sq, 7 d ch, 2 ch, 4 d c, 7 ch, 4 d c, ch 2, 7 d c, 5 sq, 10 d c, ch 2, 4 d c, ch 2, 10 d c, 10 sq, 7 sq around scallop.

Eighth row—Turn, make 9 sq around scallop, make 2 d c, ch between and 2 d c in each space of scallop, 5 sq, 7 d c, 2 ch, 7 d c, 8 sq, 7 d c, 2 ch, 4 d c, ch 2, 7 d c, 4 sq, 3 d c and turn.



Ninth row—3 d c, 5 sq, 7 d c, 2 ch, 4 d c, ch 2, 7 d c, 5 sq, 10 d c, 2 ch, 4 d c, 2 ch, 4 d c, 2 ch, 10 d c, make 3 d c and 1 d c on scallop, 5 sq and 7 d c, 2 ch and 7 d c, 9 sq, 7 d c, 2 ch and 7 d c, 5 sq and 3 d c.

Tenth row—Turn, 3 d c, 6 sq, 10 d c, 10 sq, 7 d c, 2 ch, 7 d c, 5 sq, 3 d c over each row in scallop.

Eleventh row—3 d c, picot, ch 2 and s c in each space on scallop, 6 sq, 4 d c, ch 2, 4 d c, 11 sq, 4 d c, 7 sq, 3 d c.

Make a single row of stars and sqnares for insertion.

Mrs. C. A. Winston.

The Grand Courage of the Highest Humanity

A great deal is said in our colleges and schools about the courage of the soldier, and very little about what seems to ns the infinitely higher courage of thousands in other positions of life.

We do not think the brute courage of the soldier, who fights simply for glory and pay, shooting down whoever he is ordered by his commanding officer or government to kill, or fighting for his country when his country is in the wrong, is any more deserving of praise than the brntal courage of the prize-fighter, the bull-fighter or bulldog, or the rooster, who fights other roosters when his owner orders.

But a very different kind of courage is that of the fireman, who risks his life to save other lives from burning bnildings; or the coast-guard, who risks his life to save the lives of drowning sailors; or the policeman, who risks his life to stop a runaway horse in the crowded street of a city, or in other ways to protect the lives and property of his fellow-citizens; or the locomotive engineers or steamer captains, who risk their lives to save the lives of their passengers; or the physicians or clergymen, who stand at the bedsides of those dying from epidemic diseases, and risk their lives in the performance of their humane and sacred duties; or the nurses (men and women), who risk their lives in the yellow-fever hospitals; or the Sisters of Charity and Sisters of Mercy, who risk their lives to comfort the lepers.

In a multitude of instances, which no man can number, there is vastly greater and nobler courage displayed than in the brutal courage which so many thoughtlessly praise, and we hope the time is coming when in all our colleges, schools and Sunday-schools the youth and childreu will be taught the difference between the courage of a game-cock and the grand courage of the highest humanity—the courage (which every church-spire in Christendom stands to commemorate) of Him who died on the cross, and dying said, "Father, forgive them, for they know not what they do."—Geo. T. Angell, in Dumb Animals.

Woven Rugs

I happened in on a friend the other day just as she was inspecting a large roll of what I supposed at once to be a rag carpet.

"Why," said I, "you surely haven't wasted your time piecing carpet-rags. Why, you can buy—"

"No I can't," she replied, breaking off my sentence. "This is not a carpet, but a series of the very best and most serviceable every day rugs ever invented." And sure enough she had a whole web of rugs.

I soon learned that it took just eight pounds of four-ply chain for twenty yards. The labor of preparing the rags when sewed by machine was light compared with the old-time carpet-rag sewing.

Each rug was twenty-eight inches wide and one and one half yards long. In this piece the chain was green and gold, thread about. The body of the first rug was made of brown cashmere, while the six-inch border, which crossed each end four inches from the end, was red and blue, sewed hit and miss. The next was of knit wool underclothing cut crosswise and colored dark green. The border was also hit and miss of wool scraps of all colors. The rest, except the last two, were of cotton on the same plan, but of different colors. These, my friend explained, were much more desirable for kitchen wear than any she had yet found, as they were light in weight, would pass easily through the wringer, and would wear much better than oil-cloth. One of these was quite pretty, being made of dark blue calico with a lighter border. Another was of black stockings, bordered with tan. The last two were made of an old ingrain carpet. They were so downy and yet so firm that I learned the following particulars: Cut the carpet in bias strips about one and one half inches wide. The width should depend on the thickness of the carpet. To keep them from pnlling apart sew them on the machine through the middle of each strip, joining the ends as yon go along. Wind in a skein, wash through warm suds in the open air in order to make them as woolly as possible. It requires five pounds of the sewed rags to weave a rug one and one half yards long and twenty-eight inches wide, and just one third as much chain as for rag carpet. It is always best to have these rugs woven on the end of a piece of rag carpet, taking out two of every three threads of the warp.

C. B. Riggle.

The Gibson Waist

Although this appeared last season it was not generally worn, but will be quite a feature this season as the prevailing shirt-waist. All kinds of materials are used, and its very trimness appeals to all lovers of neat dressing. The fold coming over the shoulder gives the broad effect so much sought for.

Beverages

To look over the nation's drink-bill must be a great encouragement to the temperance-workers. The statistics show that the consumption of all spirituous drinks is less than it was from 1890 to 1894, and the "American Grocer" concludes that "the cheaper and the milder stimulants are growing in favor, and are steadily reducing the use of fiery liquors."

With the great abundance and variety of fruit which this country produces it is surprising that any intoxicaut should be desired. The following are some of the popular beverages which are suitable for any company:

Kansas City Tea Punch.—Pour one quart of boiling water on one tablespoonful of any strong tea, and allow it to stand until perfectly cold, then strain. In the meantime add to one pint of sugar the juice of three lemons, the juice of three oranges, the pulp and juice of one shredded pineapple, and allow all to stand until the sugar is dissolved. When ready to serve, add the tea to the fruit-juice and pulp, with one quart of Apollinaris water and one quart of fresh berries or thinly sliced peaches. Pour over a block of ice in the punch-bowl.

American Temperance Beverage.—Take twelve lemons, one quart of ripe raspberries, one ripe pineapple, two pounds of best white sugar and three quarts of cold water. Peel the lemons very thin, squeeze

the juice over the peel, let it stand a few hours, add the sugar, mash the raspberries with one half pound of sugar, cut the pineapple, after paring it in very thin slices, and cover with sugar. Strain the lemon-juice into a bowl, add the raspberries and pineapple, and mix thoroughly. Add the three quarts of water, stir all together until the sugar is dissolved, and then it is ready to serve.

Fruit Punch.—To the juice of six lemons and three oranges add four tablespoonfuls of sugar, the juice from one can of pineapples and one can of preserved cherries, and let stand three hours. Add one quart of ice-water and one cupful of finely chipped ice. If too strong weaken with ice-water, and add more sugar if necessary, but it should be very rich, strong and not too sweet.

Fruit Punch No. 2.—Place over the fire long enough to entirely dissolve one pint of granulated sugar in one quart of water; take from the fire, add to the syrup the juice from three fine lemons, the grated peel of one lemon and the pulp and juice of one orange and one pineapple which have been peeled and picked into pieces. Let the liquid mixture stand until partly cooled, then strain through a coarse sieve, rubbing as much of the fruit through as possible, then place where it will become perfectly cold. At serving-time add to the liquid one pint of ice-cold Apollinaris water.

American Punch.—Mix together one and one half pounds of red currants, one and one half pounds of white currants, one pound of raspberries, and one pound of cherries from which the stones have been removed. Mash the fruit, and let it stand in a warm place for three or four days, keeping it well covered with a coarse cloth. Filter the juice, and to each pint of juice add two pounds of granulated sugar, and place in a granite double boiler until the sugar is dissolved. Skim, and when clear bottle and cork well till desired for use, then place two tablespoonfuls in each glass and fill with cold water.

Fruit Lemonade.—Place one and one half pints of sugar with one quart of water in a saucepan over the fire until the sugar is dissolved. Peel and grate one pineapple, and add to this one sliced banana, one half cupful of seeded cherries and one half cupful of grapes cut into halves and seeded. Add the prepared fruits to the syrup when it is taken from the fire, and when the mixture is cold add the strained juice of two oranges, one half pint of lemon-juice and one half pint of juice from berries. When perfectly cold add one cupful of water, or more if desired. Fill each glass half full of shaved ice, and pour over it three tablespoonfuls of the fruit-mixture, and serve with a spoon.

Virginia Reed.

Easter Pin-money

There is no season of the year when the farmer's wife or daughter can more easily earn a few dollars than at the happy Easter-time. They have the chief means right at hand—lots of eggs. They may make all sorts of dainty ornaments out of them, but they must begin in season, so as to get plenty made in order to sell a week or two before Easter. They may sell them direct from house to house or leave them in a store, where they are to be sold on a commission.

Easter Rabbits.—Take empty egg-shells, from which the contents have been removed through a small hole in one end, and make the rabbits by pasting long ears made of paper tinted a pale shade of pink on the inside. Fold the paper through the middle, and cut rounding to a sharp point on one end. Leave the other end straight. Paste the straight end on one end of the egg-shell in the place where the ear would naturally come, and another one just like it on the corresponding side. Then with red ink make a tiny curved mouth and dots for nostrils. With black ink make the eyes and a few long hairs about the mouth. Paste a small bunch of cotton over the hole made to let the contents of the eggs out, and the hole is covered and a tail made at the same time. Paste all onto a small square of pasteboard, which has been covered with green tissue-paper cut into strips to represent grass, and you have a cute little Easter article that will sell for from five to ten cents.

Egg Pen-wiper.—There are people who will only buy things which are of use. For them make a pen-wiper by taking the contents of the egg out in the same way and putting in the place a few spoonfuls of fine salt; then cover the hole by pasting a piece of paper over it. Draw a face on the lower half of the egg-shell, making it as comical or grave as possible; then above the face fasten a small, pointed cap by pasting the edge fast to the top of the egg-shell just where a cap would naturally come; then make a small mat of bright-colored cloth, pinked at the edges and about two inches square; paste the egg fast to the center of this, and you will have a pen-wiper that will stay where you put it. These ought to sell for from five to ten cents apiece, and a good lot of them should be made.

Match-holder.—For this you will need an egg-shell that has been opened at the end. Break away the shell for about two thirds the way down, leaving the edge as notchy as possible. Tint the inside by rinsing it with a weak solution of Easter-egg dye, and color the outside a bright color by putting the dye on with a small brush, being careful to get it on evenly; the egg may be dyed before breaking the end out by boiling in the dye, then breaking the end out and tinting the inside. To make the tray, take a round piece of plain blotting-paper, wet and bend it over the bottom of a small patty-pan, crimping the extra fullness into little crimps around the edge; let it stay on the pan until entirely dry, then remove it, glue the egg-cup fast in the center of the bottom, put the matches in the egg part and the burnt ends in the tray. This will sell for about the same as the other two.

Colored Eggs.—Save all the egg-shells during the winter, and open them in the end with a tiny hole as described above; you may make a hole in each end for this if you desire. When you have a lot of them color them different colors by putting them in the boiling dye; then string them, and sell them for about three to five cents apiece.

For candy eggs pour warm candy into the empty egg-shells; when they are cool peel off the egg-shells, and dip in colored candy until of the proper smoothness and color. These sell for five cents apiece.

Mrs. J. M. S.

Point-lace

This form of needlework is becoming more popular every day. The only requirement is neat needlecraft. After the careful basting of the braids upon the pattern it must be gone over carefully with No. 1000 thread and neatly gathered into the curves of the pattern, joined in places where the braids cross each other, and the ends fastened securely, after which the stitches in the various patterns are introduced.

The small cap is much the simplest form of work, as only a few stitches are introduced. This is a size well adapted to a child up to five months old, and as they grow rapidly the little caps must be changed by that time.

In the large cap the straight braids are joined by Venetian bars, which are a series of buttonhole-stitching upon threads carried across. The edge is finished with purling.

The center of the tie is made of very fine wash-blond, and several different braids are introduced in the pattern.

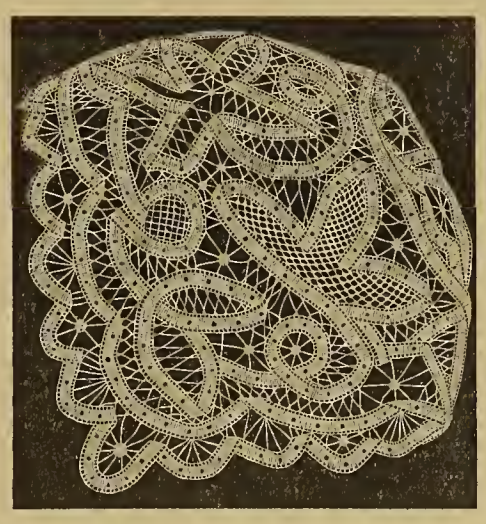
It is better to learn on a small article, as the first one you will be apt to soil, and as you go on with the work you will acquire more deftness and be able to keep it clean, as it should be. C. I.

Cooking the Easter Eggs

French Omelet.—Beat the yolks of four eggs until smooth; add a little salt, a dash of cayenne pepper and a little sugar; then add a small pinch of good baking-powder, three large tablespoonfuls of sifted flour, and milk enough to make a thin batter; pour into a well-buttered omelet-pan or granite skillet; spread the whites of the eggs, previously beaten until stiff, over the top; cook by holding high above the fire until set; brown a moment in the oven, double over, and serve hot with jam.

Shirred Eggs.—Butter an earthen or stoneware platter; break into it the desired number of eggs, sprinkle with salt, pepper and butter; over each egg pour one tablespoonful of cream or rich milk; cook in a moderate oven until the whites are set. Watch carefully or the eggs will become too hard and dry.

Ox Eyes.—Take slices of bread a little more than half an inch thick; cut into rounds with a large biscuit-cutter, taking smaller rounds from the center of each with a small cutter; lay the rings in a thin buttered tin, break an egg into the center of each ring, season with salt and pepper, and pour a little cream over each egg. Bake until the whites are set, garnish with water-cress, and serve.



Bird's Nest.—Remove shells from hard-boiled eggs; surround with forcemeat; bake until nicely browned; serve with gravy.

Curried Eggs.—Slice an onion, and fry in butter; add one tablespoonful of curry-powder and one large cupful of gravy or good soup-stock; simmer gently until the onion is cooked; cut into thick slices six hard-boiled eggs; pour the hot mixture over them, and serve with boiled rice.

Katharine E. Megee.

Ear-mittens

Did you ever have a fly crawling around in your ear? Then you may have a slight idea of how a horse feels in the spring when the herring-flies are thick. The only difference is that the flies go into the horse's ears by the dozens, and the horse has no way to get them out. Is it any wonder that he shakes his head frantically and doesn't do his work as well? A pair of ear-mittens, made of cheese-cloth to fit the ears, fastened to the bridle with tapes, and tied together at the base on top of the horse's head, will be a great relief to the horse, and are very easily made. Care should be taken to have them fit down snugly to the head, so that no flies can crawl inside. S. B. R.

Bright's Disease and Diabetes Cured

Under the Auspices of the Cincinnati Evening Post Five Test Cases Were Selected and Treated Publicly by Dr. Irvine K. Mott Free of Charge

University Chemist Acting as Referee

Irvine K. Mott, M.D., of Cincinnati, Ohio, well and favorably known in that city as a learned physician—a graduate of the Cincinnati Pulte Medical College, and of the London (Eng.) Hospitals, has discovered a remedy to successfully treat Bright's Disease, Diabetes, and other kidney troubles, either in their first, intermediate or last stages. Dr. Mott says: "My method arrests the disease, even though it has destroyed most of the kidneys, and preserves intact that portion not yet destroyed. The medicines I use neutralize the poisons that form a toxine that destroy the cells in the tubes in the kidneys."

The *Evening Post*, one of the leading daily papers of Cincinnati, Ohio, hearing of Dr. Mott's success, asked if he would be willing to give a public test to demonstrate his faith in his treatment and prove its merits by treating five persons suffering from Bright's Disease and Diabetes, free of charge, the *Post* to select the cases, and examinations to be made in the medical department of one of the most prominent universities in the United States.

Dr. Mott accepted the conditions, and twelve persons were selected. After a most critical chemical analysis and microscopic examination had been made in the university laboratory five out of the twelve were decided upon, the Professor making the examination remarking, "I should say they are all fatal cases." These cases were placed under Dr. Mott's care and reports published each week in the *Post*. In three months all were discharged by Dr. Mott as cured, the final examination being made at the university. The persons treated regained their normal weight, strength and appetite, and were able to resume their usual work.

Any one desiring to read the details of this public test can obtain copies of the paper by writing to Dr. Mott for them.

This public demonstration gave Dr. Mott an international reputation that has brought him into correspondence with people all over the world, and several noted Europeans are numbered among those who have taken his treatment and been cured, as treatment can be administered effectively by mail.

The Doctor will correspond with those who are suffering with Bright's Disease, Diabetes or any kidney trouble whatever, and will be pleased to give his expert opinion free to those who will send him a description of their symptoms. An essay which the Doctor has prepared about kidney troubles and describing his new method of treatment will also be mailed by him. Correspondence for this purpose should be addressed to IRVINE K. MOTT, M.D., 117 Mitchell Building, Cincinnati, Ohio.

ABDOMINAL BELTS, $1.00.
WALK-EASY BRACES and SUSPENDERS. 35 Cts.
SPRING or ELASTIC TRUSSES 35 Cts.
Money refunded if not satisfactory
We manufacture all kinds and any kind of a truss. All styles of Abdominal Belts, Braces, Elastic Hosiery, Suspensories, Crutches, Deformity Apparatus AT PRICES YOU CAN NOT DUPLICATE ANYWHERE.
Send for our 1902, 44-page Cat.
THE GUARANTEE MFG. CO., B 23, CINCINNATI, OHIO.

MADE $105 THE FIRST MONTH

writes FRED. BLODGETT, of N. Y. J. L. BARRICK, of La., writes: "Am making $3.00 to $8.00 every day I work." MRS. L. M. ANDERSON, of Iowa, writes: "I made $3.80 to $6.50 a day." Hundreds doing likewise. So can you. $5.00 to $10.00 daily made plating jewelry, tableware, bicycles, metal goods with gold, silver, nickel, etc. Enormous demand. We teach you FREE. Write—offer free.
G. GRAY & CO., Plating Works, A Miami Bldg., Cincinnati, O.

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"The best preparation for colds, coughs, and asthma."
MRS. S. A. WATSON, Temperance Lecturer.
"Pre-eminently the best."
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CHEAP AS WOOD
Special Prices to Churches, Cemeteries and Large Parks.
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I Will Cure You of
Rheumatism

NO PAY UNTIL YOU KNOW IT

After 2,000 experiments I have learned how to cure Rheumatism. Not to turn bony joints into flesh again; that is impossible. But I can cure the disease always, at any stage, and forever.

I ask for no money. Simply write me a postal and I will send you an order on your nearest druggist for six bottles of Dr. Shoop's Rheumatic Cure, for every druggist keeps it. Use it for a month, and if it does what I claim pay your druggist $5.50 for it. If it doesn't, I will pay him myself.

I have no samples. Any medicine that can affect Rheumatism with but a few doses must be drugged to the verge of danger. I use no such drugs. It is folly to take them. You must get the disease out of the blood.

My remedy does that, even in the most difficult, obstinate cases. No matter how impossible this seems to you, I know it, and I take this risk. I have cured tens of thousands of cases in this way, and my records show that thirty-nine out of forty who get those six bottles pay, and gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal-card or letter. Let me send you an order for the medicine; also a book. Take it for a month, for it won't harm you anyway. If it cures, pay $5.50. I leave that entirely to you. Address Dr. Shoop, Box 910, Racine, Wis.

Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

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We have designs from $4.00 to $4,000.00

COST NO MORE THAN PLAIN ONES IN

White Bronze

Marble is entirely out of date. Granite soon gets moss-grown, discolored, requires constant expense and care, and eventually crumbles back to Mother Earth. Besides, it is very expensive.

WHITE BRONZE

is strictly everlasting. It cannot crumble with the action of frost. Moss-growth is an impossibility. It is more artistic than any stone. Then why not investigate it? It has been adopted for nearly one hundred public monuments. Write at once for free designs and information. It puts you under no obligations. We deal direct and deliver everywhere.

The Monumental Bronze Co., 347 Howard Avenue Bridgeport, Conn.

GIVEN AWAY

Do you want a watch that runs and keeps good time? Our watch has a **Gold laid case**, handsome dial, dust proof, adjusted to position, patent escapement, and highly finished. This is a remarkable watch. We guarantee it, and with proper care it should wear and give satisfaction for 20 years. It has the appearance of a **Solid Gold** one. The movement is an **American Style**, expansion balance, quick train, and you can rely upon it that when you own one of these truly handsome watches you will always have the correct time in your possession. Just the watch for railroad men, or those who need a very close timer. Do you want a watch of this character? If so, now is your opportunity to secure one. **We give a beautiful Watch** as a premium to anyone for selling 18 pieces of our handsome jewelry for 10c. each. Simply send your name and address and we will send you the 18 pieces of jewelry postpaid. When sold, send us the $1.80, and we will send you the handsome **Gold laid watch**. We trust you and will take back all you cannot sell. We propose to give away these watches simply to advertise our business. No catch-words in this advertisement. We mean just what we say. You require no capital while working for us. Satisfaction Guaranteed. Address,

SAFE DEPOSIT WATCH CO. New York City

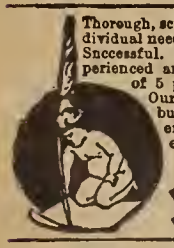
Mail-Box Tests

Tender-hearted men should not serve on the committee. Each member should be furnished with a heavy club and a dose of nerve-tonic. Before knocking the samples all over the hall, instruct janitors where to ship the remains of those that fail. If there is more than one survivor, it is a sign you are not hard hitters. Write to-day for description and prices.

Bond Steel Post Co.
Adrian, Mich.

ENGINES, BOILERS AND MACHINERY.

When you want good rebuilt machinery at bargain prices, write for our **Catalogue, No. 84.** We carry all kinds of engines (gas, gasolene and steam power), boilers, pumps, and mill supplies in general.
CHICAGO HOUSE WRECKING CO.
West 35th and Iron Sts., Chicago.



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SPRAGUE CORRESPONDENCE SCHOOL OF JOURNALISM, No. 163 Majestic Bldg., Detroit, Mich.

Two Rings Free!

We will give these Two **SOLID GOLD** laid Rings, one set with large Garnet and three Pearls, one with Ruby and two Brilliants, *FREE* to any one that will sell **12** of our **Gold Plate Enameled Brooches**, set with different colored stones at **10** cents each, and send us the **$1.20.** No money required until brooches are sold. We take back all not sold. Address
HOWARD MFG. CO., PROVIDENCE, R.I.

Dainty Dishes for Easter

A Nest of Eggs.—Pare as many potatoes as will be required, and cut them to represent straws in pieces about two inches long and a little more than one fourth of an inch thick. Fry these in deep, boiling fat to a pale golden brown. Drain, and sprinkle with salt. Arrange them in the form of a nest on a round, heated platter. Put eggs in rings on a hot, well-greased frying-pan, being careful not to break them, and fry until the yolks are set. Do not turn. When cooked arrange them in the nest, and serve all very hot. This is a nice breakfast dish.

Easter Salad.—Prepare a quantity of soft, well-seasoned cottage-cheese and some mayonnaise dressing. Make the cheese into balls about one and one half inches in diameter, then carefully flatten until about one fourth of an inch thick. Be careful not to break the smooth edge. As each round is prepared lay it on a flat platter or molding-board, then carefully cut out the center of each cake. With a silver knife cut crisp, tender lettuce into shreds, and arrange it on a platter (ready for serving) in the form of a nest. Place a cake of cheese in the center of each, and fill the hollows with mayonnaise. This simulates a poached egg very prettily. The salad is quite delicious.

Easter Jelly.—Color one quart of water a bright yellow by steeping a small quantity of dried saffron-leaves in it; add the juice of six large lemons, one ounce of gelatin previously soaked in a little cold water, and one pound of sugar. Boil five minutes, or until the gelatin and sugar are all dissolved, then stir in the beaten whites of two eggs; let boil a minute longer, and strain through a jelly-bag. Pare lemon-peels in long strips about the width of a straw; boil them in water until tender, then put them in a rich syrup, and boil until clear. Make a blanc-mange with one quart of milk, four tablespoonfuls of corn-starch, five tablespoonfuls of sugar, one teaspoonful of vanilla, and a pinch of salt. Divide this into six parts, and color these as taste dictates. A little plum jelly makes a lovely violet, spinach or parsley juice a delicate green, the grated peel of an orange or lemon moistened with the juice and squeezed through a cloth a handsome yellow, while beautiful shades of red and pink may be produced by the addition of a little currant or cranberry jelly. Pokeberry-syrup also gives a lovely pink, and chocolate a dark brown. Have ready enough egg-shells, emptied of their contents through a hole half an inch in diameter in the large end, wash and soak them well in cold water to get all the albumen out, then drain, and fill them with blanc-mange, having first set them in a pan of salt or meal to keep them from tipping. Put them in a cold place and let stand until the following day. When wanted to serve, line a round, shallow glass dish with the lemon jelly, scatter the strips of lemon-peel around the edge like straws, break the shells carefully from the blanc-mange, and arrange the different-colored eggs prettily in the nest.

Easter Jelly No. 2.—Make a plain white blanc-mange, flavor with vanilla, pour into egg-shells, and set away to harden, as directed in preceding receipt. Cut lemon-peel into slender lengths like straws; cook in water until tender, then boil in rich syrup until clear. Leave them in the syrup until required to serve, then drain carefully and arrange them in the form of a nest in a round, shallow dish. Remove the shells from the blanc-mange eggs and arrange them in the nest. Another very pretty way is to make a rich yellow custard, let it get very cold in a glass dish, and then lay the blanc-mange eggs over it. Still another way is to cover the custard with grated cocoanut, sprinkle with sugar, arrange lemon straws around the edge, and place the blanc-mange eggs, either white or colored, in this dainty nest. All these combinations are delightful both to the eye and to the palate.

A Nest of Bonbons.—Prepare lemon or orange straws as directed in the preceding receipts, only leaving them in the syrup until it begins to candy. Then lift out the straws and dry them on buttered paper. Take the whites of two eggs and two tablespoonfuls of cold water, beat slightly together, and stir in sufficient XXX confectioner's sugar to make a smooth, stiff paste; color part of it yellow with saffron-juice, use a little cochineal for pink, and spinach-juice for green. Different shades may be produced by using more or less of the coloring. Form into small, dainty egg-shapes, and place in a nest of the lemon straws. Chopped nut, dates, raisins or cocoanut may be put in the center of the eggs if desired, and covered smoothly with the fondant.

Mary Foster Snider.

CONSUMPTIVE'S BULWARK

A Prevention and Cure
For Consumption-Threatened Humanity

A FULL FREE TREATMENT
That Conquers All Chronic Life-Sapping Ills

Certain diseases kill their victims by gradually robbing them of bodily material—a manner of death slow, yet terrifying, and usually fraught with mental if not physical suffering.

Consumption actually consumes; it is a well-named plague.

Four requirements must be met to cure consumption and other wasting ills, and Four also to prevent their attack. They are: First, to combat and to forestall germs; Second, to nourish the body; Third, to tone and fortify the nerve power of resistance to disease, and Fourth, to meet the demands for local treatment.

THE FOUR FREE REMEDIES

To combat and destroy germs, to nourish the body, to fortify the system and to soothe and heal broken tendons and inflamed tissues, in accord with the necessities in particular cases, and to thus cure and prevent consumption and all vitality-draining ills of persistent, chronic nature, the above wonderful, Free combination is unmistakably unmatched. It is Doctor Slocum's grand discovery and Free contribution to masterful, scientific medical progress which has marvelously reduced the consumption death-rate in the United States.

Think of it!—the average life in this country is four and one tenth years longer now than it was ten years ago.

Reader, if you are a victim of, or are apprehensive that consumption is in your wake, this bulwark of refuge for prevention and cure is yours for the asking—free also to those near and dear to you who need the protective and curative security it affords.

Some need only the Emulsion, others the Coltsfoote Expectorant; some the Psychine Tonic, others the Ozojell. Many send for all four, use one or more appropriate for their own cases and give the other remedies to friends.

WRITE THE DOCTOR

WRITE TO DR. T. A. SLOCUM, 98 Pine Street, New York, mentioning Farm and Fireside, and the complete combination will be sent to you free from his great manufacturing pharmacies, with full directions for their use.

You are welcome to write for yourself or for another who is afflicted or menaced by wasting malady of any description.

Kindly write, giving post-office and express address, so there may be no trouble in the shipment of the remedies.

Address Dr. T. A. Slocum, 98 Pine Street, New York City, and say you saw this offer in Farm and Fireside.

Mme. Benoit's Russian Depilatory

INSTANTANEOUSLY REMOVES

SUPERFLUOUS HAIR

without torturing, blistering, discoloring, or leaving any blotch, signs, or other ill effect on the skin. An effective, instantaneous, harmless remedy.

Send for Booklet Giving Full Information

MME. BENOIT, 2 East 42d St., New York City

Kindly mention this paper.

TWO RINGS FREE

Send name and address **no money**, and we will mail you 12 boxes of Comfort Cough Tablets. Will cure a cough in one day. Sell them for **10** cents a box. Send us the **$1.20** and we will mail you these two beautiful SOLID GOLD laid Rings. Will wear a lifetime. No money required till tablets are sold. We take back all not sold.

COMFORT MEDICINE CO., Providence, R. I.

YOU DYE IN 30 MINUTES

Soiled and faded clothing of all kinds made to look like new with the celebrated TONK'S FRENCH DYES. So simple a child can use them, being twice the strength of other dyes, carpets and rugs retain their brilliancy for years, as the colors are permanent and

Will not Freeze, Boil or Wash Out

To introduce them give your dealer's name and we will send you 6 large packages for 40c, or 1 for 10c, any color. Say whether for wool or cotton. Write quick, catalogue and color card free. Agents wanted.

FRENCH DYE CO., Box 413, Vassar, Mich.

HIMSELF CURED Mr. A. S. HITCHCOCK

East Hampton, Conn. (The clothier) says if any sufferer from **Kidney or Bladder Diseases** will write him he will inform them of the perfect home cure that did the work in his case.

If afflicted with weak eyes, use **Thompson's Eye Water**

IF SICK *Our New Electric Method* WILL CURE YOU AT HOME. Book free. U.S. Electric Co., 358 Dearborn St., Chicago, Ill.

SUNDAY AFTERNOON

When Sorrow Came

When Sorrow came I did not look
  For any visitor that day.
But in beside the inglenook
  She slipped in calm, familiar way,
As one, a dear and privileged guest,
  Who pushes wide a door ajar,
And, seeking only friendly rest,
  Sits down where all the kindred are.

And first surprised, I scarcely knew
  A word to greet the stranger face;
There crept a numbing shadow through
  The brightness of my dwelling-place.
So dumb her lips, so veiled her eyes,
  So chill the hand in mine she laid,
The sunshine vanished from the skies,
  And in the cloud I knelt, afraid.

But Sorrow stayed, until I heard,
  In that hushed silence round her drawn,
Voices more sweet than song of bird,
  The tender tones of loved ones gone.
And floating from the silvern shore,
  Whereon the ransomed walk serene,
Came wafts of fragance blown before
  The angels as they hither lean.

Then, swift transfigured, Sorrow turned;
  Her look was wonderful to see;
My very soul within me burned,
  For Love in Sorrow died for me.
And Love appoints my Sorrow still,
  And sacramental cups are poured
Where I and Sorrow, if God will,
  Meet and hold tryst with my dear Lord.

—Margaret E. Sangster, in Congregationalist.

The Secret of His Promotion

The United States regular army is supposed by some to be our nearest approach to Old World aristocracy, and therefore no place for a boy without pull or prestige. Gen. Adna R. Chaffee, the governor-general of the Philippines, is conspicuous evidence that fidelity through the long years will be recognized and rewarded. He was not a West-Pointer. He was a farmer lad from Ohio.. He had the three accomplishments of the Persian boy—he could handle a weapon, ride a horse, and speak the truth. In 1861 he heard the call of country, and enlisted in the Sixth United States Cavalry, his brother Howard enlisting at the same time in the Sixth Ohio Volunteer Infantry. Later in the war the brothers crossed paths, and as they parted the young Adna, whose gallantry had already won him promotion, took his brother's hand, and said, "Howard, I don't intend that any officer is going to excel me in duty, it makes no difference what that duty is. Howard, don't let any soldier excel you in duty. The way to be a good soldier is to obey all orders."

When the war closed the brother, after brave service, returned to the quiet of his Ohio farm, where recently he related to the writer the above conversation. The future general remained in the regular army, doing his work and obeying "all orders" with the determined faithfulness indicated in his significant words. His career has been as steady in its growth as that of the sturdy oak. He is no mushroom hero. His fame is secure. Like the great Von Moltke, he has come up from the ranks, having occupied every grade of office except that of corporal. He was faithful over a few things, and has been made ruler over many.—Rev. W. H. McMaster, in Epworth Herald.

The North Pole

Four hundred human lives, seventy-five million dollars and two hundred ships have been lost in fruitless efforts to find the north pole. And yet there are people who criticize the spending by the Christian churches of a few millions in missionary exploration or world-wide evangelization. There are always those who are prone to raise the cry, Why this waste? But not all such critics by any means have the discernment to see where the real waste in the world occurs, or to admit that very far from being wasted are any honest, earnest efforts anywhere put forth.—Observer.

Not Paid for It

"Are you paid anything for swearing?" Eli Perkins once asked a commercial traveler.

"No; I do it for nothing."

"Well," said the lecturer, "you work cheap. You lay aside your character as a gentleman, inflict pain on your friends, break a commandment and lose your own soul—and for nothing! You do certainly work cheap—very cheap."—Epworth Herald.

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RESIDENCES, STORES AND OTHER REAL ESTATE, NO MATTER WHERE LOCATED

Right now, before you forget it, tell me all about your property, and how many dollars you want for it, and I will tell you just how it can be quickly sold.

No matter in what part of the United States or Canada your property is located I have a wonderfully successful plan for selling it quickly.

No matter whether your property is worth $300 or $300,000, I have a marvelously practical plan for finding a buyer for it.

I send my plan absolutely free.

When sale is made your own bank can handle the money, so that you take no risk.

I refer to the publishers of this paper and 350 other leading papers carrying my advertising.

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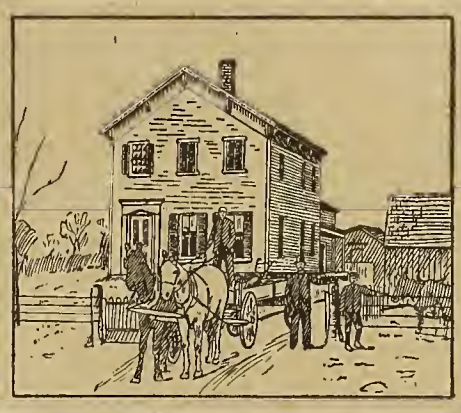
Read the testimonials at bottom of this advertisement.

Send description and selling-price of your property at once and get my free plan for making a quick cash sale.

Remember it makes no difference where your property is.

My plan, beautiful two-color illustrated booklet, telling all about how to make a quick cash sale; photographs of the largest and most complete real-estate offices in the world, and other valuable information, all sent free. Don't miss this chance if you want to sell your property. Write to-day. Don't delay. Do it now.



E37.—108 Acres, Saratoga Co., N. Y. 8 to 10 acres timber. Orchard of about 6 acres. Good buildings. 9 miles from Saratoga Springs. Good market for all products. 2½ miles to railroad station. Price $3,500—one half cash.

E122.—80 Acres, Webster Co., Mo. 20 acres timber. Fair buildings. Orchard. Stream on land. 8½ miles to railroad. Price $500.

E146.—267 Acres, Cumberland Co., N. J. 100 acres timber. Good house of 16 rooms, and other buildings. Orchard. Railroad near by. Price $4,250.

E147.—200 Acres, White Co., Ark. 120 acres timber. Good buildings. Land well fenced. Orchard of 2 acres. 14 miles to railroad. Price $1,100.

E156.—600 Acres, Newaygo Co., Mich. Poor buildings. Small stream on land. Would make a good fruit-farm. 2 miles to railroad. Price $4,000.

E166.—186 Acres, Washington Co., N. Y. 10 acres timber. Good buildings. Fruit on land. Good mineral springs. Excellent hunting and fishing. 3 miles to railroad. Price $3,500.

B851.—150 Acres, Polk Co., Fla. 30 acres timber. Fair buildings. Grove of oranges and grape-fruit. 40 acres under plow. Fine water. Eleven miles from Fort Meade. Price, $2,000.

My Plan Has Given Pleasure and Satisfaction to People In All Parts of the Country

"Inclosed please find commission for your trouble and skill in selling my land in Pike County, Pennsylvania. I must say that you know well how to sell land. I pay you this money with the greatest pleasure."
BENJAMIN SHATWELL, Cologne, New Jersey.

My Plan Is Successful, No Matter Where the Properties or the Owners are Located

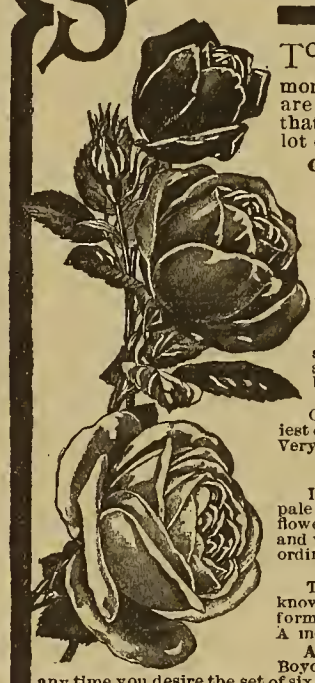
"My house and lot in Denver, Colorado, which I placed in your hands for sale a short time ago, was sold for cash as a result of your advertising, in less than one month after your first advertisements appeared."
CHARLES BATTY,
Glen Riddle, Delaware County, Pennsylvania.

My Plan Has Sold Properties for More than the Owners Asked or Expected

"After having spent considerable money and a great deal of time in trying to dispose of my property in Montour County, Pennsylvania, I placed the matter with Mr. Ostrander, and the result was that the sale was consummated in less than thirty days at a slight advance over the price I had been asking."
A. P. CAMPBELL,
Investment Securities, Lords Court Bldg., New York City.

W. M. OSTRANDER, 1404 NORTH AMERICAN BUILDING Philadelphia

SIX·EVER·BLOOMING·ROSES·FREE·



TO get you interested we will send you absolutely free, all charges paid, the following six roses; These are not cheap, common roses; they are the choicest and most famous varieties. They are healthy, well rooted plants, well packed and we guarantee that they will reach you in perfect condition; accompanying each lot of plants there are full directions for planting, care, etc..

CLIMBING METEOR.—It has been called perpetual, blooming, climbing General Jacqueminot. It is a free, persistant bloomer and will make a growth of from ten to fifteen feet in a season; in bloom all the time. Its flowers deep, rich, red and are much larger than Meteor and are richer in color. It is just the Rose to train up the veranda or around windows.

BURBANK—A perfectly hardy, free flowering, ever-blooming Rose. The flowers are double, of fine form, nearly three inches across. The color is a deep rose pink, shading to a beautiful soft rose at the center. In September and October the outer petals change to a deep, rich carmine. Delightfully fragrant.

Wonderful New Climbing Rose.—EMPRESS OF CHINA.
There is no other Rose like it that will bloom for so long a time. It is simply wonderful. When it first opens the flowers are a beautiful red, but soon turns to a lovely light pink, and it blooms so profusely as to almost hide the plant.

The Favorite Rose, YELLOW QUEEN.
One of the finest yellow Tea Roses for out-door planting and one of the hardiest of the Tea section. It blooms very freely and every flower is a gem. Very large and fully double.

WHITE MAMAN COCHET.
A Magnificent, New, Ever-Blooming Tea Rose.
It is snowy white, somtimes faintly tinged with the faintest suggestion of pale blush. It has the same freedom of bloom, magnificent form of bude and flowers, which is marvelously beautiful in its perfection. The flowers are large and very double, with petals of unusually heavy texture, making it of more than ordinary value in open ground.

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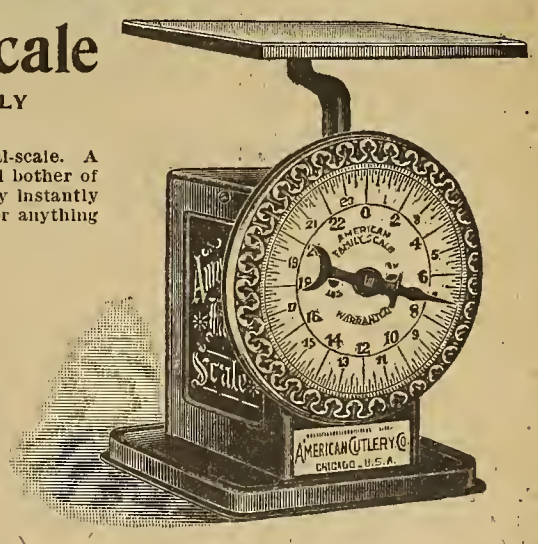

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A COLOR PORTENT

BY N. F. CADMAN

THE commonplace lot of a struggling farmer's wife, that old prosaic story of long toil and few pleasures, had narrowed Lucia Wainwright's horizon almost to the point of hopelessness. She saw Joel, her husband, growing old before his prime, and the prospect of ultimate loss hung like a cloud over their lives.

There was a despondent droop to her shoulders as she stepped in and out of the farm-house kitchen, a faded look about her figure, in its calico frock, originally lilac sprigged with black roses, and now dulled to a toneless lavender, with weary wrinkles in the sleeves from frequent rolling up and down. Her face to one with eyes to read it said plainly that she lived because she must. Such a reader, when seeing her, would be tempted to try the magic of some new vintage of joy, that the womanly features might fulfil their promise of rare truth and purity.

The Wainwright farm lay curving up the first slopes of the Sierra Nevada foot-hills from the broad plains of California's great valley of the San Joaquin. Beyond them a mountain trail led at last into the Yosemite Valley, so their summer visitors were a few enthusiasts who chose that way of reaching the famous falls.

One of the occasional guests was Mr. Ralph Powell, an artist from all the world, since that is the home of art, who made a summer pilgrimage to the Yosemite. Of the Wainwright farm and every living thing about it he took possession as a prince coming into his kingdom. The long, low farm-house with its moss-grown roof, its airy chambers, and, best of all, the old porch where one might dream pictures as well as paint them, he claimed by right of discovery, and none gainsaid him. Here one auspicious June he established himself, swung his hammock on the porch under the hop-vines, set up his easel, and lived his intense life from dawn till dark.

Late in the afternoon, when she could escape from her small inferno of a kitchen, Lucia spent an enchanted hour, her hands mechanically employed on the coarse garments in her sewing-basket, her eyes, gray as any poet's, alight with wonder as she watched the artist at his work. The easel, the camp-stool, the box of colors, were significant of a power beyond her reach, but the palette, with its dabs of color, seemed a token of hidden mysteries.

"The old farm is rich in pictures, Mrs. Wainwright," the artist said one day, busily painting a wild rose veiled in morning gossamer. "Poets love to sing of the wind-swept wheat on hillside fields."

Lucia sighed as she answered, "I like it best when the green blades are just shooting from the black soil. It is beautiful then, and I can look out across the valley fields to the dim outline of blue hills near the sea-coast. But now, with the wheat standing so tall and all dull yellow, I can think of nothing but slow flames. It seems as if the fields must be burning, and on hot days I can easily fancy smoke rising over the farthest fields. The very sky is flame-color." She shuddered a little, as with a presage of disaster.

"What an eye for color you have!" exclaimed the artist. "Did you never, in all your life here, think that you could paint what you so clearly see?"

Lucia hastily rose, saying, "Wait a moment, Mr. Powell," and entering the house, returned with a small, faded and worn portfolio. "Here is the work I began to do ages ago, but I put it away. It was crowded out of my life."

The artist turned the yellow leaves with a lingering touch. The few sketches were true and vigorous. His discernment had not been at fault; this woman had the soul of an artist. Here was something for him to do.

"Come and try this, Mrs. Wainwright." His tone was a command, and she rose as if called to some simple service. It was a far cry from the homely stitching of coarse garments to the artist's canvases, and Lucia glanced whimsically at the sewing-basket as she took her place beside the easel.

Gravely placing before her a small copy—a woodland scene with a tinge of autumn in the foliage—teacher and pupil spent an hour of rare profit. They laughed over her successful copying, but as the moments flew Lucia felt her early power returning, with an added sense of having always painted pictures. She worked in a sort of rapture, holding the mysterious palette on her thumb, and receiving his instructions with an absorbed consciousness, as if her fingers were imbued with his own spirit of power. Day by day the wonder grew as practise gave facility of touch. The artist's idle suggestion, a whim with little thought behind it, awakened the dormant faculties of the woman, and glorified her life. Her body partook of the new essence. Her form straightened and strengthened. The glow of those enthralling afternoons lightened her daily burdens.

She was rigidly conscientious, exacting of herself the full payment of her daily vows, lest she dim by any neglect of duty the gift waking to life in her soul.

Her husband made a jest of her efforts, while secretly proud of her success. He suggested all sorts of subjects for her brush, from old Dan, the house-dog, snapping at flies as he lazily dozed on the porch, to the great header making his harvest in the fields. His own life brightened under the still ecstasy in which his wife lived, and he began to recall scenes of their early days together, when hope was strong in the hearts of both. Life looked less gloomy that summer than it had for many a day.

Lucia steadily persevered, working with a quiet energy born of her long-accustomed duties, till Mr. Powell urged her to choose her own subjects and develop them without his help. He must reach the valley before the summer closed, though he did not regret the long delay that had permitted him to lead a dreary life into a new land that was bright with promise.

When the farmer heard of Mr. Powell's proposed departure he counseled delay.

"There's a line of smoke over the Edmonds' trail that looks ugly," he said, pointing to a gray streak threading the tops of the tall trees far up the mountain-side. "It's early for forest-fires, 'though there's plenty to burn."

"Don't go yet, Mr. Powell," Lucia urged. "Joel reads the air like a sailor. We shall know in a day or two if all is well," and she turned to her canvas again, where morning-glories blossomed under the light touch of her brush.

So the artist yielded, nothing loath, and bethought him of a brother in the craft, to whom he sent a few of Lucia's sketches, and wrote:

"She has an unclouded gift, a passion for color so intense that a poor combination jars upon her as a discord in music; is, perforce, deficient in form, and here her late development will suffer most. Yet you will see that there is no woodenness in the sketches I send you, and which I swear by my palette I have not touched. Yosemite calls me, yet I linger here, flattered by the knowledge that I have helped a chrysalis to its butterfly existence."

That night the wind arose, and under its breath the gray thread over the Edmonds' trail burst into flame that soon wrapped the hill forest in its mantle of destruction. Lucia and Joel and their guest stood on the old porch and watched the majestic trees in their brave beauty, lighted to their death by their own funeral pyres. An infolding flame would give one brief moment of distinction to every bough and leaf, then leave but a blackened shaft crumbling to its fall. Joel, at first secure in the direction of the wind, watched the upper air with a keenness of vision taught by the instinct to protect his own that imbues the man in whose soul lies no shadow of weakness. He moved from Lucia's side to glance toward the north, then went rapidly to the harvesters' quarters. The two watchers, absorbed in the frightful color glory before them, did not for the moment miss him, and in that one moment the artist-soul of the man reached out and met the woman's soul whose long darkness his hand had lighted, and as the destruction swept ruthlessly on its way they seemed lifted from earth to some height whence they saw all things with one vision.

In that brief eon the danger turned toward them, and they saw Joel with his handful of men working—since there was no water save such as might quench the thirst of a man—to raise great mounds of earth between the house and the fields, where naught remained of the wind-swept wheat but a stretch of gray ashes. Instantly Mr. Powell joined the workers, who toiled as men whom death is goading, and Lucia stood in the woman's place, to bear her watch of agony alone. Bewildered, overwhelmed, she turned to Joel where he fought with all his powers alive to the contest—for her. Alone in the shadow of the porch she stretched out her arms, and called his name entreatingly.

But Joel heard nothing, nor did his helpers, save the roar of the flames and the howl of the wind. The homely duties of daily need saved Lucia's reason, and she slipped into the house to prepare food and rest for the toilers, her soul poured out in wordless prayer.

No one knew how long it was, but when Lucia returned to the porch only a faint glow remained, fast fading on the hillside. She could see the stars again. Then two bruised and blackened figures staggered arm in arm into the house, and Lucia lost herself in service. She bathed and comforted them as a mother soothes her feeble children. She watched till they slept, and her great spirit triumphed in that solemn hour over all weakness.

Long she knelt beside Joel, where he lay sleeping the deep sleep of exhaustion, and on her knees she learned, with one great throb of thankfulness, that while it had been her privilege to quaff a cup of mead beside the way, yet here—and she laid her cheek on her husband's rough hand—she might drink of the wine of life through all of time.

At dawn she arose, chastened, yet wholly at peace, and grandly strong for the task that lay before her. The two men were slow in recovering from the tremendous battle they had fought, and when they lay in that strange border-land where death is not and life lingers waiting for desire, Lucia, who seemed to need no rest, spent hours upon a large canvas, where the forest-fires burned and glowed again. The horror of it was gone, and she remembered but the majesty, the awe-inspiring grandeur of the crimsoned smoke and great trees all aflame. Beyond these lay a long, deep outline of snow-capped mountain peaks against the night sky, a faint glow tingeing their calm whiteness. In the foreground was but the rugged top of a mountain, on its craggy summit an eagle's nest, the frightened brood stretching their unfledged wings toward the fierce mother-bird that soared above them, her broad wings dipped guardingly between them and fiery death.

The summer sky began to wane before strength returned to the two men. Mr. Powell recovered first, the dross all burned from his spirit, leaving a priceless friendship to refresh him body and soul. He relieved Lucia in the care of Joel, whose anxiety for the future kept back the faltering strength.

Lucia's picture of the fire revealed powers before which he stood amazed. He knew where it would meet with full appreciation, and watched eagerly for the last touches to be given to the superb conception. In the chrism of a tragedy that threatened more than life she had far outstripped him. He was ready to sit at her feet, and learn as humbly as Lucia had learned of him so long ago.

That she did not know her own gift the artist sorrowfully owned, and confiding his perplexity to Joel, whom he loved as Jonathan, the two men quietly discussed different means of leading Lucia to understand her own abilities. They feared to startle her, seeing her daily pursuing the humblest duties as if they were uppermost in her thought.

One balmy afternoon when the air was fairly alive with beauty, Joel, leaning on

"Lucia, Joel and their guest stood on the old porch"

"Lucia, who seemed to need no rest, spent hours upon a large canvas"

Lucia's arm, slowly made his way to the old porch, and Mr. Powell gently forced him to rest in the hammock. Lucia sat beside him, watching hungrily for signs of returning strength, when Mr. Powell handed her a letter addressed to herself. It was from the friend to whom he had sent her sketches, and cordially welcomed her to the guild of artists. After some kindly commendation of her work he urged her to send him a picture as soon as possible, as he had secured an order from a wealthy patron of art who had admired her sketches.

For a moment Lucia paled with dismay. Money for her paintings? It was like paying for heart-throbs. But the touch of Joel's weak hand gently laid in question on her arm revealed to her all that the letter meant. Her picture might be the means of hastening the laggard health of her beloved.

She sent the painting out of her life, and then she could but wait. Days passed and hope grew faint. It was doubtless all a mistake. There must be glaring faults that trained eyes would instantly detect.

She almost dreaded at last to hear the fate of her picture, and schooling herself to forget it, returned to her old-time duties with vigor, though no defeat could take all the color out of life.

Mr. Powell was impatient of delay, took long tramps, packed and unpacked his belongings, and at last declared he would wait no longer. The picture should be sent abroad if its first critics did not appreciate it. Joel alone was absolutely confident, and quietly urged his restless friend to wait. Then came a day when the old farm-house became a Palace Beautiful. Far beyond their highest hopes, the picture had stirred the little circle of art-lovers that received it.

Like one dreaming, Lucia heard the story of the sale, how the picture had been placed against a background of dull crimson, in a small, carefully lighted room, where a few chosen ones were permitted to enter and marvel at her work. It was part of a vision that they stepped lightly and spoke in whispers in the presence of their adored art.

Slipping to her knees beside Joel she looked up in a fervor of gratitude to the infinite source of her gift, her face illumined with the consciousness of power to conquer worlds.

TWO MELODIES

BY L. MORGAN McNIGHT

A MAJOR

A blast of trumpet, roll of drum,
And trihued banners flying;
A flash of blue, and buttons gold,
And loud huzzas a-crying.

A sturdy tramp of eager feet,
Dark eyes with purpose glowing,
An air surcharged with patriot fire,
And martial music flowing.

Young blood, impassioned, throbbing swift,
Young hands for battle longing,
Young lives, to God and country true,
The patriot ranks are thronging.

A MINOR

A solemn hush, a waiting throng;
Sweet organ-tones soft falling
In march-time cadence—echo-like
Of one once so enthralling.

The fall of halting, trembling feet,
The tap of cane and crutches;
Bent forms and hoary heads, and hand
That at the high pew clutches.

A pleasant hour of prayer and song,
The past reviewed in story.
And oh! the years and deeds between
The dark head and the hoary.

FOR LOVE OF COUNTRY

BY FRANK H. SWEET

"Do you think it safe?"

There was anxiety in the speaker's voice, and the stern face of his companion grew yet more stern as he answered, "As safe as a man's love for his life can make it. The fellow is a reconcentrado, and therefore his patriotism has limits. Otherwise he would be with the insurgents instead of tilling fields and catching fish. A physically strong man does not avoid his country's war through bravery."

"True; but he is a Cuban, and we should take no chances."

"On the contrary, we must take all chances. How can we do otherwise? Rumors of our expedition are already abroad, and inside of twenty-four hours they will be across the mountains and Corjavos will be on its guard. We must either surprise the place or give up the project and return to Havana."

"Yes, I understand that. But the man?"

"Is the only means at hand. We must reach Corjavos in advance of the rumors, and the only possible way to do it is by the secret pass through the mountains, of which I have spoken. This man has always lived in the vicinity, and is familiar with it. He admits as much. I will place guards on either side, with orders to kill him on the least sign of treachery or hesitation. He is a Cuban, it is true, and a patriot very likely; but he is a reconcentrado and a physically strong man, therefore he loves his life. He will guide us faithfully, never fear. And besides, as I said, there is no other way. We cannot chase the rumors across the mountains by regular channels. We must slip ahead of them through this labyrinth of defiles, which will take us to Corjavos in eight hours, and which I understand opens almost into the heart of the town and citadel. A surprise means possession, and possession means a mastery of that portion of Cuba. It is not a question of prudence, but of dash. The men have been selected for this, and have been promised plenty of pillage. See," nodding toward the lines of dark, swarthy faces that were watching them expectantly, "all they wait for is a command from you."

The grim face of the officer beside him relaxed somewhat.

"Very well, Captain Lopez," he said, "it shall be as you wish. You are an old campaigner here, while I am but newly arrived. Call the reconcentrado."

Captain Lopez gave the order, and two soldiers stepped forward with the Cuban between them. He was a slight, wiry fellow, with a face so impassive as to seem stupid. Captain Lopez glanced at his companion reassuringly. A fellow like that was safe; the glance said he did not know enough to be otherwise. The point of a sword at his throat was all that would be needed. And the officer, agreeing with the glance, allowed the last vestige of doubt to leave his face.

"You are familiar with this short route to Corjavos?" he demanded.

The reconcentrado was silent.

Captain Lopez raised his sword with a swift, adroit movement, and a line of blood began to trickle from the man's throat, and yet no vital point had been reached.

"Do we understand that you are familiar with the route?" he asked, significantly.

For an instant the man's eyes flashed into theirs, then the gaze dropped.

"Si, senor."

"And you can lead us to Corjavos in eight hours?"

"Si, senor."

"Muy bueno—Pedro, Mateo," beckoning forward two of the soldiers, "you walk beside this man. Watch his every movement. If there is the least sign of treachery, kill him. If he hesitates or leads us astray, kill him. If he makes any signal, or there is any sign of ambush or danger, kill him. Do not give him the benefit of a doubt. Do you understand?" to the reconcentrado.

Not the quiver of a muscle disturbed the impassive face; and yet both officers had an uneasy conviction of a smile, so elusive as to seem below rather than upon the surface.

"Si, senor."

"Bueno. It is well to know what is before us." Then Captain Lopez allowed the menace to go from his voice. It might be well to take possession of other avenues to the man's heart.

"If you lead us to Corjavos in eight hours," he said, slowly, "and all goes well, you shall have as much good Spanish gold as you can carry, and besides," his eyes groping for the man's soul like two stiletto-points, "such members of your family as I understand are in prison shall be released. Now lead the way."

The Cuban turned, but the muscles of his throat had grown tense. The watchful eyes saw and began to gleam. This, then, was the avenue to the reconcentrado's heart.

"Yes, all members of your family who are in prison shall be released," he repeated, as they moved toward the apparently unbroken mountain wall in front, "and in addition we will grant you as many leagues of cane-land as the eight hours are decreased."

The Cuban did not answer, did not even raise his eyes as they advanced against the wall of rock. Presently a ravine opened on their right, broadening and deepening as they went forward, until, near the face of the wall, it was thirty feet or more in depth, with sheer sides and jagged, cactus-grown bottom. The men gazed down the precipice, and up the barrier of rock, which towered in front, and their steps grew slow. They were not flies to creep down perpendicular walls, nor birds to scale heights that were almost a mockery to vision.

But as the wall closed in upon them, so near they could touch it with outstretched hands, the Cuban swerved into a fissure that opened almost parallel to the face itself, and so narrow that they could scarce squeeze into it single file. A few yards, however, and the fissure broadened into a ravine that was wide enough for three or four to walk abreast. Then it dropped down over great boulders and through transverse gulches, where the men slipped and blundered and grumbled, and then up and down and up again, until the toiling, exasperated men lost all sense of direction and almost of object. Sometimes they were going north, sometimes south, sometimes east and sometimes west. The ravine became broken into a dozen, a hundred, leading in all conceivable directions, and apparently to nowhere. To the men they all appeared alike, and the gulches and great boulders which continually blocked their way ceased to surprise. Even the mountains conspired against their progress.

From time to time, as the course doubled upon itself, the Spanish officers glared at their guide as though in sudden suspicion. But as he moved on stolidly, familiarly, choosing his route among the labyrinth of ravines without the slightest hesitation, this suspicion as often became dormant. Of course he was safe. Were not the two guards ready to kill him at a moment's notice? And then there were the promised gold and liberation of his friends. No reconcentrado could be proof against all that.

So they toiled on, hour after hour, to the north, south, east and west, the soldiers muttering under their breath, the officers watchful, but uncertain, and the Cuban with his eyes still bent steadily upon the ground. And then at last, so suddenly as to cause a general start of surprise, they emerged from a narrow fissure and left the mountains and ravines behind.

Naturally they looked to see Corjavos, but it was not there. Instead they saw an open country, with a ravine on one side. And on the very brink of the ravine stood the Cuban. His eyes were not bent upon the ground now, but gazed straight into those of the officers, and there was a smile on his face.

"Cuba libre!" he cried, mockingly.

In a flash all understood. They were at the very point where they had entered the mountains, eight hours before.

The officers raised their hands simultaneously, and there was the report of the guards' rifles sounding as one. The reconcentrado dropped backward into the ravine. It was not quite clear, however, whether he fell before the report or after. But apparently it did not matter. They gazed over the brink and saw him lying thirty feet below. Bullets or ravine, it was all the same.

"Come," said Captain Lopez, savagely, "we may as well go back to Havana."

Down in the ravine the reconcentrado listened until the sound of their footsteps died away in the distance. Then he raised his head with difficulty, for he was sorely bruised and crushed; but for a moment a smile of exultation drove the agony from his face. For himself it did not matter. It was nearly night now, and on the morrow starving peasants would come to hunt among the cactus-plants for bits that were edible, and they would find him. And with that thought, and the smile of exultation upon his face, he lost consciousness.

The Chef and His Minions

"For his service the chef of a big hotel may receive ten thousand dollars a year, a big salary for cooking, but by no means a salary out of proportion to his value to the hotel. He is supreme in his workshop, the kitchens, which are large, brilliantly lighted and scrupulously clean rooms, with hardly a suggestion in the air of broiling and baking and roasting and frying that is going on all around. The chef, with subchefs over the butcher-shops, the soups, the entrees, the roasts, the vegetables, the bake-shops and the pastries, and a hundred cooks are calling out orders in French, for they are nearly all French or Swiss, and French is the language of the kitchen as well as of the court wherever a good cuisine is attempted, and bustling around in their white caps and aprons, so intent on their work that the intrusion of a stranger is not noticed. The waiters, in their black coats, with their order-cards and their trays, thread their way in and out among the cooks, each hurrying to fill his order in the shortest possible time. It is a finely specialized kitchen, however, and all the scurrying back and forth and shrill calls in French for portions of many dishes seem confusing only for a moment. Then follows an appreciation of the wonderful system of the place that insures the highest art in cooking; of the men, who do nothing but roast all day with a knowledge of the exact number of minutes and even seconds required to produce the best results; of others, who juggle copper skillets; of others, who fry and bake and carve and garnish, and of the garde-manger, where the portions of meat and raw foods are prepared and dressed for the range.

"Each cook attends only to the preparation of his own dishes, and as for the chef, he seldom cooks at all. He has an office of his own, where he keeps his memoranda, his books and his special menus, and the secrets of his business. During the rush hours his place is in the center of the kitchen, directing, watching and, when necessary, admonishing. If several big banquets are in progress, making it necessary to send hundreds of portions of each dish to them at once, it is the chef's duty to see that these courses are sent up promptly, and to check off each one on the bulletin-board at the time it is sent. When he goes off duty one of his assistants takes his place. Besides the cooks there are a dozen men and women who do nothing but peel potatoes, others who make toast, and still others who attend to the big dish-washing machines. The butcher and his assistants have charge of the supplies of meats, some of which—for instance, beef—are kept in the big refrigerators, where the temperature never varies a degree for three months, before serving."—George Barry Mallon, in Ainslee's.

Pictures Made by Man

Among the most interesting of the discoveries made by the scientists who devote their time to researches into the paleolithic ages—thousands of years before recorded history begins—are those which prove that even in those dim and distant ages man, such as he was, had esthetic yearnings. One of the most important of such discoveries has been made in France, in the grotto of Combarelles, near Eyzies, in Dordogne. The discovery was communicated to the Academie des Sciences by Messrs. Capitan and Breuil, and was accompanied by drawings of certain figures of animals engraved on the walls of the grotto on each side of its length. The drawings are in some places quite deeply engraved in the rock; in others they are only scratched.

It was at once evident to the discoverers that these remarkable rock drawings were identical in character with those on fragments of bone and horn, of which casts may be seen in the British Museum, and that the same striving after truth in rendering the characteristics of the animals was to be seen in the grotto of Combarelles, proving the familiarity of the artist with the appearance of the animals themselves, so that the artist was contemporary with the animal he drew. Now one of these animals being a hairy mammoth and the other a reindeer, it is evident that when those creatures roamed the hills and valleys of South Central France man was also there—that is to say, in the paleolithic, or older stone, age.

"The precision with which the figures are drawn," say the discoverers, "allows us to recognize the species of the animals so represented. The equine types are sometimes large-headed, with short, stiff manes—sometimes with flowing manes and tails. Some of the horses were domestic animals. One of them has on its back a covering—a paleolithic horse-cloth—others have traces of bits and halters. The bovine types are less frequent; one of them has the character of certain African antelopes (such as the gnu), while another is much like our oxen of to-day. The running reindeer is identical in character with those which are engraved on bone and of the same period. The representations of the mammoth (of which fourteen were exhibited to the Academie des Sciences) are very characteristic. Some are more hairy than others."

With these rock drawings are strange signs engraved in the rock—a circle with the semblance of human features, a double-outlined lozenge on the middle of the body of one of the horses, others of M-like shape, semi-circles, etc., all of mysterious and unknown significance. Since the memorable day when the first piece of engraved bone was discovered embedded in the stalagmite of the caverns once tenanted by human beings there has been no discovery which has caused so great an interest as this one in the stalagmite cavern of Combarelles.—London Daily Graphic.

Diamonds

"The world has never seen, and in no other part of the world is there now to be seen, anything like America's jewel-madness as shown by the conditions of to-day, when more than three hundred New York establishments are engaged solely in the importation of precious stones, when agents of American dealers are searching Europe for the white gem, and hopelessly endeavoring to supply American appeals for rubies and emeralds, and when six thousand men in South Africa are toiling to obtain diamonds, more than half of which are to add to the beauty and happiness of the American woman. It is she that has caused the United States to become the greatest diamond-market in the world. For her we have imported in a single year twenty million dollars' worth of precious stones; for her at one period we smuggled them in at the rate of seven million dollars a year; for her we annually buy something like twelve million dollars' worth of diamonds, and thus for her sake heartlessly leave of the world's total output of diamonds only some eight million dollars' worth to satisfy the vanity of all the rest of the women on earth. For her adornment we annually cause to be brought to this country diamonds weighing in the aggregate one thousand two hundred pounds, a weight three times that of the total output of the famous Kimberley field, and practically the equal of that of the whole of South Africa, the world's greatest diamond-mine."—Frank S. Arnett, in Ainslee's.

Gipsy Virtue

It is true that the gipsy as a class will resort to trickery, but as for stealing, "What indeed could we do with most things if we did steal them?" It was John David Lee who put this question. He and his wife and child were traveling alone when I met them. "You see our wagon," he went on. "We travel as light as we can, and every bit of space is taken up with necessaries. Where could we find room for stolen goods?" The gipsy is a rover, but no vagrant, for he carries with him always his home, his family, his pride and tradition of race, and his gipsy honor, and around his wagon and tent belongings is drawn a magic circle of content. As for the gipsy woman, she is famed like the ideal of Solomon of old for virtue and devotion to home and family.—R. T. Fletcher Berry, in Frank Leslie's Popular Monthly.

Modernizing the Holy Land

The modernizing of the Holy Land continues at so rapid a pace that we are told it will not be many years before, in some sections at least, the country will have lost its ancient, oriental aspect. This transformation is due largely to American ingenuity and commercial activity. Somebody has said that if one of the prophets had returned to Palestine a few years ago he could have looked upon the scenes of his earthly career and would have been able to recognize them. But that time has passed away.

The railroad from Joppa to Jerusalem was the entering wedge in the modernizing process, and now other lines, running up and down the valley of the Jordan, are to be connected with this road. Jerusalem is becoming in many respects a modern city. Electric-lights, telephones, phonographs, sanitary plumbing, modern stores, and many of the comforts of civilized life are now found there. It will not be long before one will be able to ride from Jerusalem to Bethany, Bethlehem, the Sea of Galilee, Samaria, Jericho, Nazareth and many other historic places by trolley. One of the United States consuls states that over two hundred phonographs were recently sent into the Holy Land, half of them going to Damascus and the rest to Jerusalem and other places. One wonders why phonographs should go in such quantities to these places, and the wonder increases when we are informed that the best customers for these machines are the Moslems of Beirut, Jerusalem and Damascus, who purchase them for their harems. A large number of American windmills have gone into Palestine, as well as irrigating machinery of various sorts. A large assortment of articles of American manufacture is steadily pouring into the Holy Land, among them being cotton fabrics, bicycles, rope, shoes, clocks, wire nails, paints, hardware, well-drilling and agricultural machinery, mechanics' tools, canned meat, and corn-meal. There seems to be a movement on foot to secure control of the once fertile valleys of the country and to transform them once more into a land flowing with milk and honey. The people connected with this movement are said to be Zionists, whose supreme purpose in life seems to be the re-establishment of the Jews in their ancient heritage.—The Chautauquan.

Care of the Eyes

Avoid sudden changes from dark to bright light.

Take little of stimulants or drugs that affect the nervous system, patent and other medicines included.

Don't read when tired or when lying down.

Look up from reading or work when eyes feel tired.

Take care of the body and the body will take care of the eyes.

Before forty bathe the eyes twice daily in cold water, after forty use very hot water followed by cold water.

The older you grow the more you should avoid artificial light. Also get to bed early.

Don't rely on your own judgment in getting glasses.

Don't give up in despair if a cataract or other disease should form in the eye. In these days of skilful dieting its progress may be stopped. A cataract can be removed painlessly and with little danger to vision.

A mild eye-wash for red or itching eyes can be made with half a teacupful of clear water, a small pinch of baking-soda, the same of salt, and one fourth of a teacupful of glycerin. Put two or three drops of this in the eyes every two or three hours. Continued pain, redness and other symptoms should call for skilful diagnosis and treatment.

Thos. M. Stewart.

New York East-side Pictures

On the street-corner a man and woman meet. The woman carries a little child, shielding it as well as she may from the piercing cold. The child, coming from the warmth of the day-nursery, shivers and tries to cuddle closer. "Any luck, John?" the woman asks.

"I've tramped all day, and it's the same old story, they're turning men off, not taking on new men," he replies.

"Oh, John!" The sob in her voice makes her husband wince. "And they didn't pay me today; they said, 'Come next week.' What shall we do!" Then, forcing a brightness into her voice, she hugs her child closer, and adds, "At least Maggie has been well fed at the nursery. She won't suffer to-night."

They turn in at the alleyway. The wind howls through the hall, up the dark staircase, through great cracks in the door and in at the loosened casement. And there is no fire. Presently the woman slips out; she hurries along the street, stops at the sign of the three balls, hesitates, then goes in. It is the first time, but John must be "heartened up," though she part with her wedding-ring.—Jean Loomis, in Southern Workman.

—Treading the path to noble ends,
A long farewell to love I gave;
Resolved my country and my friends
All that remain'd of me should have.
—Waller.

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A Solid Gold Ladies' or Gents' watch costs from **$25 to $50. Don't throw your money away.** If you want a **watch** that will equal for time any **Solid Gold Watch** made, send us your name & address at once & agree to sell **only 8** boxes of our famous Vegetable Pills at 25 cts. a box. It's the greatest remedy on earth for Constipation, Indigestion & all stomach disorders & they sell like hot cakes. Don't miss the chance of your life. Send us your order & we will send the 8 boxes by mail. When sold you send us the money & we will send you the **WATCH** with

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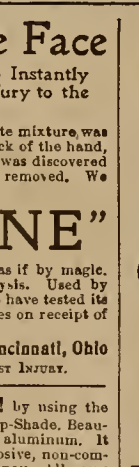

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The New Remedy For Catarrh is Very Valuable

A Grand Rapids gentleman who represents a prominent manufacturing concern, and travels through central and southern Michigan, relates the following regarding the new catarrh cure. He says:

"After suffering from catarrh of the head, throat and stomach for several years, I heard of Stuart's Catarrh Tablets quite accidentally, and like everything else I immediately bought a package and was decidedly surprised at the immediate relief it afforded me, and still more to find a complete cure after several weeks' use.

"I have a little son who sings in a boys' choir in one of our prominent churches, and he is greatly troubled with hoarseness and throat weakness, and on my return home from a trip I gave him a few of the tablets one Sunday morning when he had complained of hoarseness. He was delighted with their effect, removing all huskiness in a few minutes and making the voice clear and strong.

"As the tablets are very pleasant to the taste I had no difficulty in persuading him to use them regularly.

"Our family physician told us they were an antiseptic preparation of undoubted merit, and that he himself had no hesitation in using and recommending Stuart's Catarrh Tablets for any form of catarrh.

"I have since met many public speakers and professional singers who use them constantly. A prominent Detroit lawyer told me that Stuart's Catarrh Tablets kept his throat in fine shape during the most trying weather, and that he had long since discarded the use of cheap lozenges and troches on the advice of his physician that they contained so much tolu, potash and opium as to render their use a danger to health."

Stuart's Catarrh Tablets are large, pleasant-tasting lozenges, composed of catarrhal antiseptics, like Red Gum, Blood Root, etc., and sold by druggists everywhere at 50 cents for full treatment.

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Asthma sufferers need no longer leave home and business in order to be cured. Nature has produced a vegetable remedy that will permanently cure Asthma and all diseases of the lungs and bronchial tubes. Having tested its wonderful curative powers in thousands of cases (with a record of 90 per cent. permanently cured), and desiring to relieve human suffering I will send free of charge to all sufferers from Asthma, Consumption, Catarrh, Bronchitis and nervous diseases, this recipe, in German, French, or English, with full directions for preparing and using. Sent by mail. Address with stamp, naming this paper.

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SMILES

When Father Was a Boy

So everything was peaceful when my father was a boy?
I don't see how he ever lived ter tell the lonesome tale;
I should 'a' thought he'd died or else been swallered by a whale,
Er something orful happened ter him 'cause he was so good,
An' did the things he orter do in just the way he should.
The rest of them have all fell off, an' now there's only one,
An' I have heard, but never seen, the noble things he done;
The perfick ways in which he'd all his energies employ
Ter win some golden medal—when that feller was a boy.
—Dwight Anderson, in Cleveland Plain Dealer.

The Dead Swan

A GENTLEMAN in Lincolnshire, England, sent a dead swan to the Athenaeum Club, addressed to the secretary. A special dinner was to occur that week, and the committee without question turned the bird over to the cook.

At the dinner the swan, resting on a great silver dish, was a delight to the eye; but when it came to carving and eating the bird no knife seemed sharp enough to cut it, and eating it was out of the question.

A few days later the donor met the secretary, and said, "I hope you got my swan all right?"

"That was a nice joke you played on us," returned the secretary.

"Joke! What do you mean?"

"Why, we had the thing boiled for thirteen hours, and even then we might as well have tried to cut through the Rock of Gibraltar."

"You don't mean to say you had the swan cooked!"

"Why, of course."

"Man alive! I sent it to be stuffed and preserved as a curiosity in the club. That swan has been in my family for two hundred and eighty years. It was one of the identical birds fed by the children of Charles I. You've seen the picture of it. My ancestor held the post of 'master of the swans and keeper of the King's cygnets.' Well, I have no doubt it was a bit tough."—Youth's Companion.

One of Moody's Jokes

D. L. Moody was always full of fun. He saw the comic side of things, and as a boy enjoyed putting practical jokes upon any one whom he well knew. In the rear of his Uncle Samuel's retail shoe-store in Boston was a cobbler's repair kit—seat, tools, awls, etc., and the seat was, as usual, a piece of leather concavely shaped downward at its center.

One day the workman on this saucer-shaped seat felt it becoming uncomfortably damp, then really moist. He rose, and saw a damp spot on the seat. Supposing that a few drops of water had been accidentally dropped upon the seat before he sat down to his work, he folded an old newspaper, placed it, and sat comfortably down to resume his work. But the moisture seemed strangely persistent. Rising again, he found the paper becoming soaked with water, and he stood perplexed, his hammer in one hand and the soft, wet paper in the other.

Looking this way and that in his perplexity, he soon heard a half chuckle, half snicker, which could no longer be repressed, and there behind the door was the country boy, learning how to be useful in a city shoe-store, as he really and rapidly did, but taking his fun as he went along. He had placed a shallow dish of water close up to the under side of the center of the leather seat, which only touched the water when the weight of the occupant was upon it, so three or four small awl-holes served his purpose for that time.—Congregationalist.

He Meant the Bird

A man once received as a present from a sea-captain a fine specimen of the bird known as the "laughing-jackass."

As he was carrying it home he met a brawny Irish navvy, who stopped him. "Phwat kind of a burrd is thot, sorr?" asked the man.

"That's a laughing-jackass," explained the owner, genially.

The Irishman, thinking he was being made fun of, was equal to the occasion, and responded, with a twinkle of the eye, "It's not yerself—it's the burrd I mane, sorr!"—The London Spare Moments.

Why He Wanted the Minister

Willie had swallowed a penny, and his mother was in a state of much alarm.

"Helen," she called to her sister in the next room, "send for a doctor. Willie has swallowed a penny."

The terrified boy looked up imploringly.

"No, mama," he interposed, "send for the minister."

"The minister!" exclaimed the mother.

"Yes, because papa says our minister can get money out of anybody."—Pittsburg Bulletin.

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When Cupid toys with glittering gems."—Byron.

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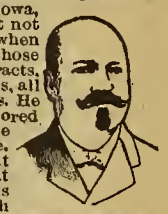

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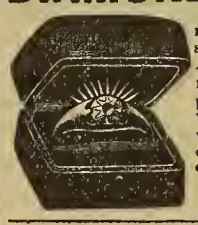

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$1,000.00 IN PRIZES

315 PRIZES—WHY NOT MAKE $300.00?

For the exclusive benefit of Farm and Fireside people we are going to award three sets of prizes, 315 prizes in all, as given below. FIRST SET OF PRIZES is for raising greatest weight of seed-corn, second greatest, third greatest, etc., from one pound of Finest Thoroughbred Seed-Corn furnished by us. SECOND SET OF PRIZES for raising the greatest number of pods, second greatest, third greatest, etc., from one half pound of a new variety Matchless Stringless Beans furnished by us. THIRD SET OF PRIZES for growing the greatest number of roses, second greatest, third greatest, etc., on Three Fine Rose-Bushes furnished by us. You may enter one, two or all three contests. You keep all you raise, and sell it, or plant it next season, as you please. Read "HOW TO ORDER" and "HOW TO ENTER FOR MORE THAN ONE PRIZE" at bottom of page.

Corn-Raising Contest

$100.00 Cash and 104 Other Prizes

GOLDEN HARVEST YELLOW DENT CORN

Pronounced the best dent corn in the world. Our supply is obtained by special arrangement with the originator. Ears large and handsome, with good, deep grain of deep orange-color, and small red cob. Stalk medium size (not large), few suckers, slender and leafy. Makes the best of fodder. Two good ears to each stalk. Husks and shells easily. Ripens in 90 to 100 days, and makes a crop even in dry seasons, because so early maturing and strong in growth. Has yielded **one hundred and thirty-six bushels of shelled corn to the acre.** Suits greater variety of soils than any other corn we know of. A big yielder naturally, this corn has been so improved by seventeen years' careful hybridization and perfecting that it is now simply unequaled, and will weigh out more shelled corn to the bushel than any other variety on the face of the globe.

The yield from the seed we send you will plant a field next year. Or you can sell at big price for seed-corn. *A money-maker*, and you will miss a splendid opportunity if you fail to get a pound, aside from the $100 and other prizes.

LIST OF PRIZES

We will give the following prizes for raising the greatest weight of corn, second greatest, third greatest, etc., from one pound of Golden Harvest Yellow Dent Corn described above:

1st Prize—$100.00 Cash.
2d Prize—Fine Piano-Box Buggy; value $60.00.
3d Prize—Latest Improved Spring-Tooth Harrow; value $20.00.
4th Prize—Set Solid Leather Buggy-Harness; value $15.00.
5th Prize—Latest-Make Breaking-Plow; value $10.00.
50 Prizes—Handsome Engraved Watch to each; value $2.00.
50 Prizes—Solid Steel Wagon-Jack to each; value $1.25.

HOW TO ORDER

SEND US 50 CENTS (this is cents for the Farm and Fireside, and cents for cost of sending seed). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

ONE POUND GOLDEN HARVEST YELLOW DENT CORN

We will also enter your name for the Corn Prize Contest. Rules for weighing yield, making report, etc., sent with seed. Be sure to state which contest you wish to enter.

Bean-Raising Contest

$100.00 Cash and 104 Other Prizes

NEW PERFECTION STRINGLESS BEAN

This new bean is a cross between a strain of Extra Early Round Pod and an absolutely stringless wax variety, giving much larger and handsomer pod and without any string. It is also more prolific and ready for market a week earlier. Compared with other beans the pods are one third larger, averaging five to six inches long, and absolutely stringless. Bean unusually crisp, round, full and fleshy. Being extremely productive and easily grown. A very small patch will keep a family supplied the whole season. Grows without stakes or poles, being a true bush-bean. Seed is warranted pure, coming direct from the originator, who is one of the leading vegetable-growers in America. It is the perfection of stringless green-pod beans.

LIST OF PRIZES

We will give the following prizes for raising the greatest number of pods, second greatest, third greatest, etc., from one half pound of New Perfection Stringless Bean described above:

1st Prize—$100.00 Cash.
2d Prize—Set Elegant Parlor Furniture; value $50.00.
3d Prize—Latest-Make Double Cultivator; value $20.00.
4th Prize—Library of 50 Cloth-Bound Books; value $20.00.
5th Prize—Library of 25 Cloth-Bound Books; value $10.00.
50 Prizes—Handsome Dial-Scale to each; value $1.25.
50 Prizes—Set of Six Finest Silver-Plated Teaspoons, Engraved Initials, to each; value $1.00 each set.

HOW TO ORDER

SEND US 50 CENTS (this is cents for the Farm and Fireside, and cents for cost of sending seed). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal subscription, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

ONE HALF POUND NEW PERFECTION STRINGLESS BEAN

We will also enter your name for the Bean Prize Contest. Rules for counting the yield, making report, etc., sent with seed. Be sure to state which contest you wish to enter.

Rose-Growing Contest

$100.00 Cash and 104 Other Prizes

Three Prolific Queenly New Roses

Competitors in our rose-growing contest will be furnished three of the most beautiful and ready-growing roses in the world. The plants are extra large and uniform in size, and every one is now soon to bloom. Following is description of each variety:

WHITE MAMAM COCHET

A new, magnificent, ever-blooming rose. Flowers large and very double, with petals of unusually heavy texture, making it extra valuable in open ground. Has the vigor of an oak, with large, heavy foliage. Hardy and of extraordinary merit.

MLLE. FRANCESKA KRUGER

In its shading of deep, coppery yellow unique and strikingly beautiful. Flower of good size and very symmetrical. One of the finest roses known for full and continuous blooming.

CLOTILDE SOUPERT

A strong, vigorous grower. Large, beautiful, double flowers borne in sprays, blending in color from a soft shell-pink to a pure satiny white. An extremely profuse bloomer.

LIST OF PRIZES

We will give the following prizes for growing the greatest number of roses, second greatest, third greatest, etc., on three rose-bushes, the kinds described above:

1st Prize—$100.00 Cash.
2d Prize—Set Handsome Dining-Room Furniture; value $50.00.
3d Prize—Ball-Bearing Sewing-Machine; value $30.00.
4th Prize—Complete Decorated China Dinner-Set; value $12.00.
5th Prize—Splendid Kitchen-Cabinet; value $7.50.
50 Prizes—Beautiful Cut-Glass, Sterling-Silver Top Salt and Pepper Set to each one; value $1.25 the set.
50 Prizes—Silver-Plated Butter-Knife and Silver-Plated Sugar-Shell, the set of two to each; value $1.00 the set.

HOW TO ORDER

SEND US 50 CENTS (this is cents for the Farm and Fireside and cents for cost of sending roses). We will then enter your name for one year's subscription to the Farm and Fireside, either new or renewal, and will immediately send you, **securely packed, fully prepaid and free of all charges,**

THE THREE EXTRA LARGE ROSE-BUSHES

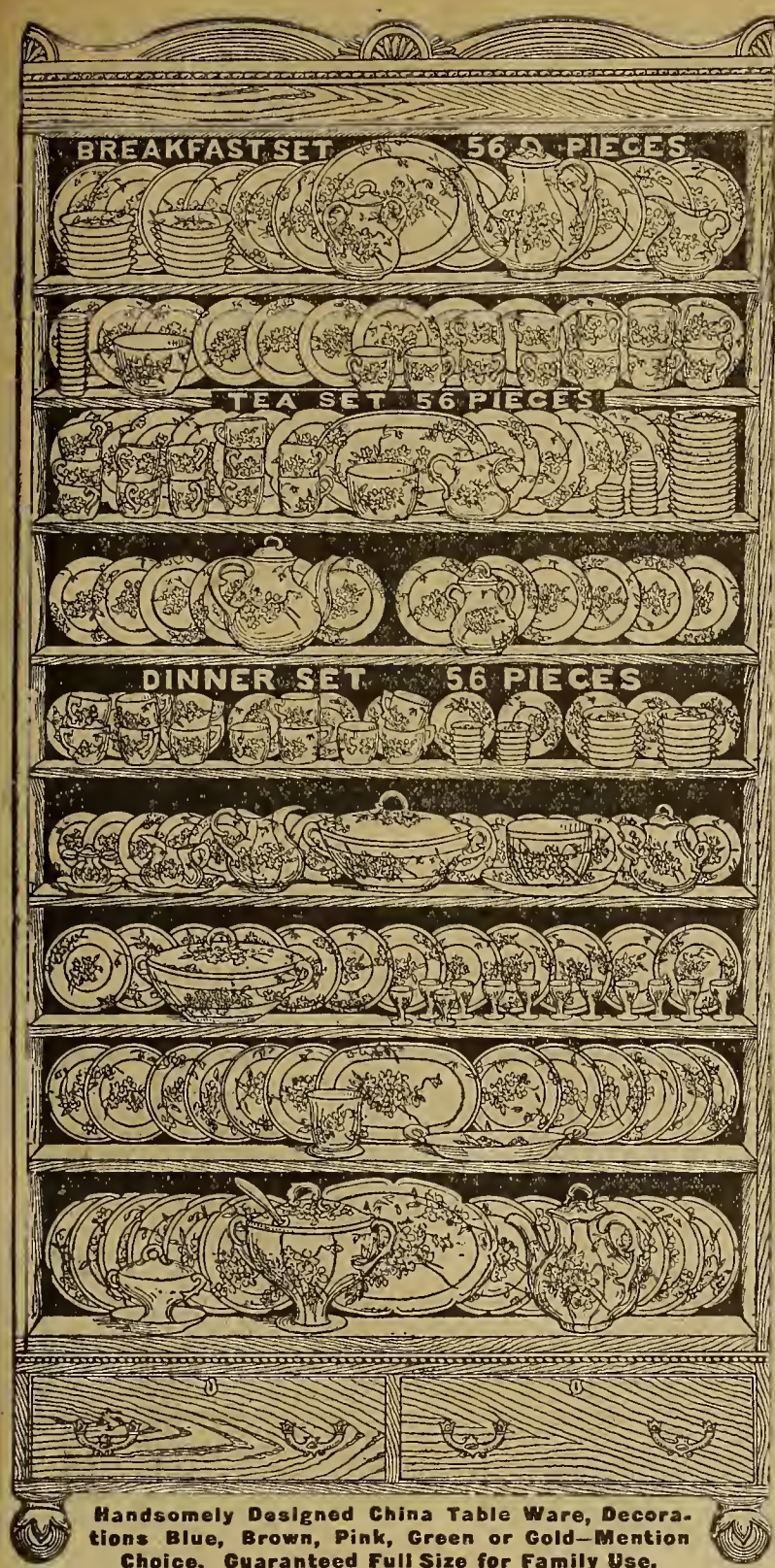
We will also enter your name for Rose-Growing Prize Contest. Rules for counting roses, reporting, etc., sent with rose-bushes. Be sure to state which contest you wish to enter.

HOW TO ENTER FOR MORE THAN ONE PRIZE

To enter any of the above contests the seeds or rose-bushes must be procured as above. No other kinds of corn, beans or roses can compete. You can enter one, two or all three of the contests. **FOR $1.00** (two contests) we will send you both corn and beans, or corn and rose-bushes, or beans and rose-bushes; we will also enter your name for TWO years' subscription to the Farm and Fireside, or send the paper to you one year and to any one else one year. **FOR $1.50** (three contests) we will send you the corn and the beans and the rose-bushes, and THREE yearly subscriptions to the Farm and Fireside for yourself or for your friends. Contests close at the end of the harvest season of this year. Arrangements made insure correctness, so that all prizes will go to those entitled to them.

ORDER NOW SEEDS OR PLANTS SENT AS SOON AS YOUR ORDER COMES **NO DELAY**

Address Prize Contest, FARM AND FIRESIDE, SPRINGFIELD, OHIO



Handsomely Designed China Table Ware, Decorations Blue, Brown, Pink, Green or Gold—Mention Choice. Guaranteed Full Size for Family Use.

56 PIECES

BREAKFAST SETS, DINNER SETS, - - TEA SETS, - - - - FREE!

Watch Warranted for 20 Yrs.

We give you a **56 PIECE BREAKFAST, DINNER,** or **TEA-SET**—full size for family use—**FREE OF COST.** Here is your opportunity. Do not miss it. This means exactly what it says. We give the Sets away **ABSOLUTELY** free. There is no fraud or humbug in this announcement. There is no juggling of words, no misrepresentation, no deception, no misunderstanding, no manipulation of words or phrases intended to deceive or befuddle you. All is plain, open, above board, and understandable. We will do what we say and give what we agree. When we state **WE GIVE A 56 PIECE SET,** we do not mean that we will send an OFFER or proposition, a plan used by others so often to entrap and deceive, but **WE GUARANTEE** to forward **the real genuine goods themselves.** Choice given of a Breakfast, Dinner, or Tea Set—each set consisting of 56 Pieces, beautifully decorated and artistically designed. In addition to the 56 Piece Sets, every person gets an elegant Watch warranted for 20 years, or 12 Silver Plated Tea Spoons, 6 Table Knives, 6 Table Forks, 6 Table Spoons, a pair of ladies' or gents' Kid-Gloves, or a box of one dozen handsome Stockings. (Gloves and Stockings for ladies or gents—all sizes and colors.)

6 Knives, 6 Forks, 6 Table Spoons, & 12 Tea Spoons

REASONS FOR LIBERALITY.

We manufacture the celebrated family and household remedy for men, women, and children—BLOOD GLOBULES, a specific for all blood diseases, nervous disorders, sluggish circulation, impaired vitality, rheumatism, female complaints, liver, kidney, and stomach troubles. We guarantee it to be the best remedy on earth for these diseases. We wish to introduce "BLOOD GLOBULES" in thousands of homes where it has never been used, and have set aside

$25,000 CASH TO BE SPENT

in giving away valuable and useful presents to those who are willing to help us.

On request we will send you 7 boxes of Blood Globules, all charges paid, which are to be sold at 25 cents per box, remit the $1.75 collected and we will present you with a 56 Piece Breakfast, Dinner, or Tea Set, and in addition we will immediately send you, all charges paid, a Watch, or 12 Silver-Plated Tea Spoons, 6 Table Knives, 6 Table Forks, 6 Table Spoons, a box of one dozen Stockings (ladies' or gents'), or a pair of ladies' or gents' Kid Gloves. ☞Remember **YOU HAVE ONLY SEVEN BOXES OF BLOOD GLOBULES TO SELL—no more.**

☞ THE ONLY CONDITION. MARK IT WELL. ☜

This is one of the most sensational strokes of advertising ever launched and we will carry it out, as our reputation depends upon the fulfillment of every promise made. In these days of active competition in business enterprises, it is necessary to do something startling to outstrip one's rivals, and that is just what we intend to do. Of course a large amount of cash and nerve are required to enable anyone to take the lead. We have both Nerve and Cash and are ready to give a share of the **CASH TO YOU** in presents. We guarantee satisfaction to all who do business with us.

Address: **BLOOD GLOBULE COMPANY, NEW YORK CITY, N. Y.**

NO MONEY. ☞

Remember you need not pay a **Penny** in advance. Only send your full name and post-office address with nearest **Express** and **Freight Depot.** We box, pack, and deliver the Sets **FREE OF ALL EXPENSE** to Express or Freight Depot and we further guarantee against breakage or damage in any form.

WRITE YOUR ORDER ON THIS FORM, CUT IT OUT AND SEND IT TO

BLOOD GLOBULE CO., New York. Farm and Fireside.

PLEASE SEND ME 7 BOXES OF BLOOD GLOBULES, WHICH I WILL SELL AT 25 CENTS A BOX, AND I AGREE TO REMIT THE $1.75 WHEN SOLD. FORWARD ME THE PRESENTS SELECTED BELOW.

Name..... Town..... State.....

County..... Street and No.....

Express Office..... Freight Office.....

Do you want a Breakfast, Dinner, or Tea Set? ..... What additional Premium do you want? .....

☞If you do not wish to cut this paper then make a copy of this coupon and send us your written order.

FREE DECORATED NEEDLE-CASE

With Complete Assortment of Fine Needles

Outside View of Needle-Case
Very much reduced in size.

Every woman will appreciate this useful and handsome article. The case is

Handsomely Decorated in Colors

Its general shape is that of a horseshoe, hinged at the base of the shoe. The back also has a design in colors. Open this case measures 9 inches long by 4¼ inches wide.

On one side there are four needle-pockets, containing sizes 3, 5, 6, 7 and 9 of the finest imported needles. On the other side is an assortment of fifteen fancy needles, including a square-end bodkin 2¾ inches long, two large darning-needles, each about two inches long, and twelve fancy large and small eyed needles. All of these needles are

Sharp's Best Ellipse Silver-Eyed

The eye is so shaped as to be threaded with the greatest ease; has no sharp edge to cut the thread. Another valuable feature is a groove-shape given to the end of each needle at the eye, so that the thread will follow the needle through any cloth, heavy or light, without the slightest strain. Order as **No. 122.**

This Needle-Case FREE

1 We will send this Needle-Case FREE, postage paid, for sending one yearly subscription, new or renewal, to the Farm and Fireside; or

2 We will send the Farm and Fireside one year, new or renewal, and this complete Needle-Case for **35 Cents**

(When this offer is accepted no cash commission can be allowed and the name cannot count in a club toward a premium)

Perfect Knife and Scissors Sharpener—FREE

The most ingenious and effective sharpener for both knives and scissors ever made. The sharpening surface is furnished by two disks, which are so fastened that they can be turned when their edges are worn down. In this way the sharpener will last many years. These disks are tempered steel, especially made for putting a keen, smooth edge on knife or scissors. In sharpening scissors the blade is laid flat, inner side down, on the projection next to the left-hand disk, as shown in the illustration, and is drawn toward the point. In sharpening a knife, the blade is drawn through, edge down, at the place where the two disks meet. This is a perfect sharpener. It will save its cost many times over every year. You can keep your knives and scissors in fine edge all the time at the cost of only a moment's labor. Sent by mail, post-paid. Order as **No. 672.**

1 We will send this Sharpener FREE for sending only one yearly subscription, new or renewal, to the Farm and Fireside; or

2 We will send the Farm and Fireside one year, new or renewal, and this Sharpener for only . . . **35 Cents**

(When this offer is accepted no cash commission can be allowed and the name cannot count in a club toward a premium)

BULL-STRONG Steel Wagon-Jack

The finest, strongest, easiest-operated wagon or carriage jack ever made. It is a wonder for lifting power, and at the same time it can be operated easily by a child. Nothing to equal it has ever been invented. Note these good points.

NO CAST METAL NO WOOD ALL WROUGHT-STEEL ADJUSTED IN AN INSTANT

There is absolutely no other wagon-jack that has such perfect adjustment combined with such matchless strength. The weight of your hand will lift a heavy wagon like a feather. You do not need to put extra pressure on in starting to lift with this jack. It works smoothly and easily from the start. The jack is extremely useful also for all kinds of lifting about

The HOUSE, the BARN, the WORKSHOP or the STORE

It is an invaluable article for every household. The jack takes up a ground space only 5 by 6 inches. It is sent by express, charges paid by the receiver. Order as **No. 716.**

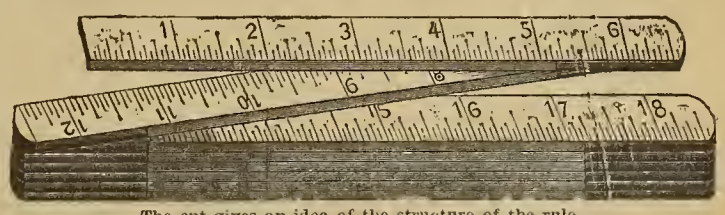
1 We will send this Jack FREE for sending only four yearly subscriptions, new or renewal, to the Farm and Fireside; or

2 We will send the Farm and Fireside one year, new or renewal, and this Jack for only . . . . . **85 Cents**

(To Club-Raisers:—When the subscriber pays you this special price you are entitled either to the regular cash commission or to count the name in a club)

FINEST, FOLDING FOUR-FOOT RULE

This is the finest, spring-joint, folding four-foot rule made. It is the acme of usefulness and durability, and will be found worth many times even the regular retail price at stores.



The cut gives an idea of the structure of the rule.

IT HAS PATENT FLAT, CONCEALED SPRING-JOINTS

which hold the sections firmly in place and in a perfectly straight line when the rule is open, or just as firmly when it is closed. The joint works by a pressure on the section. The rule closed measures only seven and one half inches by five eighths of an inch by seven eighths of an inch. It can be carried in a pocket with the greatest convenience. Open it is full four feet long. The finest wood is used in its manufacture. Sent postage paid. Order as **No. 728.**

1 We will send this Four-Foot Rule FREE for sending only two yearly subscriptions, new or renewal, to the Farm and Fireside; or

2 We will send the Farm and Fireside one year, new or renewal, and this Four-Foot Rule for only . . **60 Cents**

(To Club-Raisers:—When the subscriber pays you this special price you are entitled either to the regular cash commission or to count the name in a club)

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

FARM SELECTIONS

Dairy Notes

If you are buying cows don't haggle about the price of a first-class animal. One dollar saved by buying an inferior animal will be many dollars lost before a year is gone.

A cow that does not respond to good feeding should at once be gotten rid of. Beef her, bury her, or anything, for she will run you into debt. Keep only cows that will pay, and care for them so they can pay.—Dorothy Tucker, in the Farm Journal.

RECENT PUBLICATIONS

BOOKS NOTICED

The Race Question. By R. P. Brorup. Pamphlet. Price 15 cents. North and South Publishing Co., Fitzgerald, Ga.

Large Hay Crops. A Record of Experience Under Unfavorable Conditions. By George M. Clark, Higganum, Conn.

Strawberry Culture. By M. Crawford. Paper. Sixty pages. Price 10 cents. M. Crawford Co., Cuyahoga Falls, Ohio.

The Utility of an Academic Education for Young Men Who Have to Earn Their Own Living and Who Expect to Pursue a Commercial Life. An investigation by R. T. Crane, Chicago, Ill.

The Cow-pea. By the Experiment Farm of the North Carolina State Horticultural Society. An illustrated pamphlet of sixty-two pages discussing the uses and value of this important crop. Every reader can get a copy free by writing to "Experiment Farm," Southern Pines, S. C.

CATALOGUES RECEIVED

W. N. Scarff, New Carlisle, Ohio. Nursery catalogue of "the latest things out."

Coles & Co., New York City. Illustrated catalogue of fruit crates, baskets and boxes.

Perpetual Hen Co., St. Charles, Ill. Catalogue of the "Natural Perpetual Hen" incubator.

Edw. L. Moore & Co., Sundance, Wyo. Illustrated leaflet of an automatic wagon-brake.

The Burnap Co., Toledo, Ohio. Circulars of creamery, cheese-factory and dairy supplies.

Coe & Converse, Fort Atkinson, Wis. Catalogue and price list of fruits and ornamentals.

De Loach Mill Mfg. Co., Atlanta, Ga. Illustrated catalogue of high-grade mill machinery.

Harry N. Hammond Seed Co., Bay City, Mich. Illustrated catalogue of Northern-grown seeds.

Sturges, Cornish & Burn Co., Chicago, Ill. Illustrated catalogue of the "International" cream-separator.

J. G. Harrison & Sons, Berlin, Md. Nursery catalogue. Specialties, Keiffer pear, apple, peach and plum trees.

The Conard & Jones Co., West Grove, Pa. "New Floral Guide," describing new roses, bulbs and flower-seeds.

Petaluma Incubator Co., Indianapolis, Ind. Illustrated catalogue of the "Petaluma" incubators and brooders.

J. M. Phillips' Sons, Mercersburg, Pa. Illustrated catalogue of garden, field and flower seeds, thoroughbred poultry, etc.

A. B. Howard & Son, Belchertown, Mass. Illustrated catalogue of "Howard's New Star Petunias," the floral novelty of 1902.

Chicago Flexible Shaft Co., Chicago, Ill. Handsome catalogue illustrating and describing hand and power sheep-shearing machines.

James Vick's Sons, Rochester, N. Y. "Vick's Garden and Floral Guide," with half-tone illustrations throughout and covers in colors.

Clay Phelps Incubator Co., Cincinnati, Ohio. Illustrated catalogue of the "All Right" incubators and brooders, sold on forty days' free trial.

Deering Harvester, Chicago, Ill. Handsome catalogue of the Deering steel rice-binder, with half-tone illustrations of the Gulf Coast rice industry.

The Livingston Seed Co., Columbus, Ohio. Illustrated annual of "Livingston's True Blue Farm," garden and flower seed. Tomatoes a specialty.

The Hawkeye Incubator Co., Newton, Iowa. "A Book About Profitable Poultry," illustrating and describing the "Hawkeye" incubators and brooders.

J. D. Tower & Sons Co., Mendota, Ill. Pamphlet illustrating and describing "XX Century Corn Culture" with the Tower pulverizers and cultivators.

W. Atlee Burpee & Co., Philadelphia, Pa. Prize supplement for 1902, telling about the prize awards in the "public-opinion" contest and on trials of novelties in 1901.

Empire Agricultural Works, Cobleskill, N. Y. Illustrated folder of straw-preserving rye-threshers, grain-threshers, tread-powers, feed-cutters, feed-mills, silos, etc.

P. M. Sharples, West Chester, Pa. "The Separator," a large, illustrated circular describing the Sharples tubular cream-separators and the works where they are made.

The Hawkeye Incubator Co., Newton, Iowa. Handsome, illustrated catalogue of the "Hawkeye" incubators and brooders, which are sold direct to poultry-raisers on thirty days' trial.

Cutaway Harrow Co., Higganum, Conn. Illustrated pamphlet describing Clark's Cutaways—disk-harrows, cultivators and sulky-plows—lightning weeders, grass-hoes, root-cutters, cider-presses, etc.

LARGEST COW IN THE WORLD

WEIGHT 2970 LBS., AGE 8 YEARS, SHORTHORN. She eats "INTERNATIONAL STOCK FOOD" every day and is owned by International Food Co., Minneapolis, Minn. "INTERNATIONAL STOCK FOOD" causes Cattle, Horses, Hogs and Sheep to grow very rapidly and makes them Big, Fat and Healthy. Is used and strongly endorsed by over 500,000 Farmers. It is sold on a Spot Cash Guarantee to Refund Your Money in any case of failure by over 30,000 Dealers. It will make you extra money in Growing, Fattening or Milking. Owing to its blood purifying and stimulating tonic effects it Cures or Prevents Disease. It is a safe vegetable medicinal preparation to be fed in small sized feeds in connection with the regular grain. It Fattens Stock in 30 to 60 Days less time, because it aids Digestion and Assimilation. In this way it saves a large amount of Grain. The use of "INTERNATIONAL STOCK FOOD" only costs 3 FEEDS for ONE CENT. Ask your dealer for it and refuse any of the many substitutes or imitations. It always pays to feed the best. "INTERNATIONAL STOCK FOOD" is endorsed by over 100 leading Farm Papers.

A $3000.00 STOCK BOOK FREE

MAILED TO EVERY READER OF THIS PAPER.

This Book Contains 183 Large Colored Engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc., and of this Cow. It cost us $3000 to have our Artists and Engravers make them. It contains a finely illustrated Veterinary Department that will save you Hundreds of Dollars. Gives description and history of the Breeds of Horses, Cattle, Sheep, Hogs and Poultry.

THIS BOOK FREE, Postage Prepaid, If You Write Us a Postal Card and Answer 3 Questions:

1st—Name this Paper. 2nd—How much stock have you? 3rd—Did you ever use "INTERNATIONAL STOCK FOOD" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs. The Editor of this Paper will tell you that you ought to have a copy of our finely illustrated Book for reference. The information is practical and the book is Absolutely Free. We Won the Highest Medal at Paris in 1900.

We will give you $14.00 worth of "INTERNATIONAL STOCK FOOD" if Book is not exactly as represented.

Answer the 3 Questions and Write Us At Once for Book.

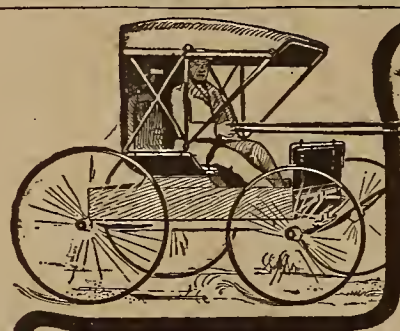
Largest Stock Food Factory in the World. Capital Paid in $1,000,000.00

INTERNATIONAL STOCK FOOD CO., MINNEAPOLIS, MINN., U. S. A.

3 FEEDS FOR ONE CENT

Dealers Sell These on a "Spot Cash" Guarantee

International Stock Food. International Poultry Food. International Louse Killer. International Worm Powder. International Colic Cure. International Harness Soap. International Gall Cure. International Heave Cure. Silver Pine Healing Oil, Etc.



DRIVING A BARGAIN AT LONG RANGE

You do exactly this when you send your money away for a buggy or carriage you have never seen. Whether you get a bargain or not depends not on your good judgment or shrewdness but entirely upon the honesty of the man who sells you the buggy. Your money is in his hands and you are at his mercy. We do not believe in that method. It is too one-sided. What is our plan? Well, we have such confidence both in you and in our **Split Hickory Vehicles**, to please you, that we ship anywhere on

30 DAYS' FREE TRIAL.

Hitch it up; take it home and test it. Compare it with the buggies your neighbors have paid considerable more for, and if not satisfied you have the best bargain of your life at the end of 30 days you can send it back to us without paying one cent. We manufacture our own goods. We know how and of what material they are made, and we know they will stand the test. Our large new catalogue describes and gives prices of our mammoth line of buggies, surreys, carriages and harness. It is free. Send for it at once.

Ohio Carriage Mfg. Co., Station 23 Cincinnati, O.

One Horse and the "Planet Jr."

There is no implement made that can compare with our "Planet Jr." Horse Hoe for all around usefulness. With its numerous attachments it comes mighty near being indispensable. The levers regulate the depth and width. Remember that none of the numerous imitations of this implement can approach it for results. Ask for and insist upon "Planet Jr.," the one that is guaranteed. Our "Planet Jr." line includes 25 styles of Seed Drills, Wheel Hoes, Orchard and Pivot Wheel Cultivators, Sugar Beet Drills and Cultivators, etc. Every intelligent farmer should have one of our new catalogues for 1902. in the house. Several hundred thousand other farmers write for them every season. It tells how the "Planet Jr." line of goods are used, and tells it well and briefly. We simply want you to write, sending your name. We mail it free.

S. L. ALLEN & CO., Box 1107-F, PHILADELPHIA, PA.

Kalamazoo Carriages

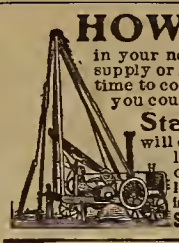
have been manufactured in our factory for 22 years. They are so perfect that we sell them direct to user on

30 DAYS' FREE TRIAL,

giving the buyer every chance in the world to be satisfied. Our work is all high grade and our prices 25 to 40 % lower than dealers charge for same or inferior quality. Send for free catalog of full line of up-to-date styles.

Kalamazoo Carriage & Harness Mfg. Co.
(Pioneers of the Free Trial Plan.) Station C, Kalamazoo, Mich.

HOW MANY MEN



in your neighborhood need wells for home supply or live stock purposes? Just take the time to count them, then figure up the money you could make in drilling those wells.

Star Drilling Machines will do the work better, more of it and last longer than any other machines of the kind made. Send for our free illustrated catalog, price list, etc. Here is a chance to get into business for yourself.

STAR DRILLING MACHINE CO., Akron, O.

Trade Mark.

LUMP JAW

Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free if you ask for Pamphlet No. 219.

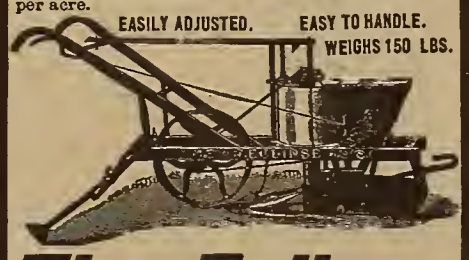
Fleming Bros., chemists, Union Stock Yards, Chicago, Ill.

A Good PLANTER

should plant all kinds of field seeds, *Field, Ensilage and Sweet Corn, Peas, Beans, Sugar Beets, Stock Beets, etc.*

It should plant in hills, drills or check at the will of the operator. It should at the same time drop or drill all kinds of commercial fertilizers, wet, dry or lumpy, pulverized hen manure and other home made fertilizers, evenly in any quantity per acre.

EASILY ADJUSTED. EASY TO HANDLE. WEIGHS 150 LBS.



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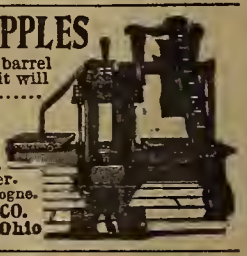

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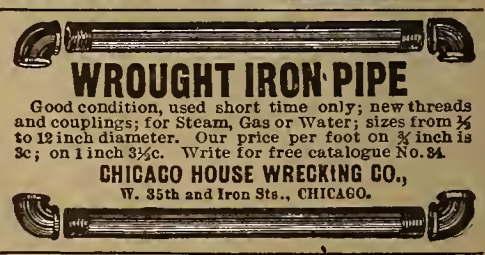

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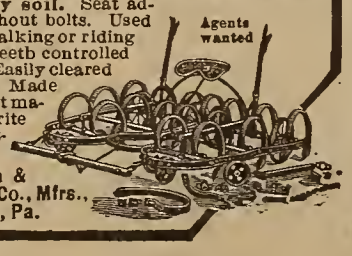

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